HOW DID KNIGHTS USE THE TOILET IN THEIR ARMOUR?

HISTORY REVEALED

BRINGING THE PAST TO LIFE
ISSUE 25 // JANUARY 2016 // £4.50



CHARLES DARWIN
The genius and his voyage of discovery

WORLD WAR II TANKS
The epic Battle of Kursk

ALSO
WHEN PARLIAMENT BURNED
LEANING TOWER OF PISA
CHARLEMAGNE
MUSSOLINI

IMMEDIATE MEDIA
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THE LAST PHARAOH CLEOPATRA

How Egypt's legendary Queen seduced the might of Rome

PLUS

Tutankhamun, Ramesses and the great Pharaohs of Ancient Egypt



LOST TRIBES
Extraordinary photos of Native Americans

STAYING ALIVE
The 10 greatest tales of survival ever told

SHIPS, STARS AND CLOCKS
Solving Longitude




It's amazing who you see in
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Happy New Year!

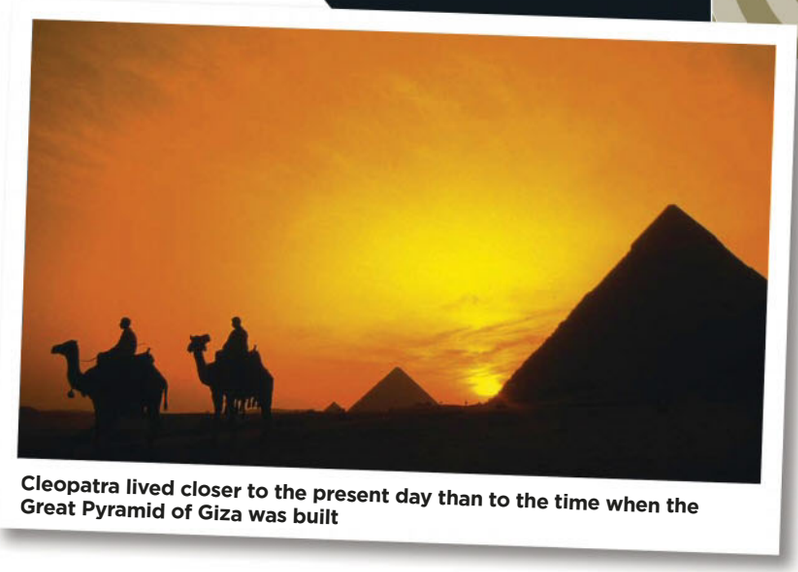


Of all the beguiling, fascinating and enduring characters from history, Cleopatra is perhaps the most captivating. **Her beauty, cunning and power are legendary** – but what do we actually know for sure about Egypt's last Pharaoh, arguably **the most famous woman in history**? And what of the Pharaohs who preceded her? What was it like to be a Pharaoh in Ancient Egypt, and **why was dying such a big part of life**? The mysteries unravel from page 26.

Life and death are, of course, what history is all about and we've plenty of both to kick off the New Year – thankfully more of the former than the latter! Our top ten survival stories (*p70*) are **testament to the lust for life** that keeps us going, while **Charles Darwin, on his voyages of discovery** aboard the *Beagle* (*p58*), began to see life itself in a whole new light.

On the subject of sea travel, be sure not to miss the story of the Longitude problem (*p72*), which saw **a self-taught clockmaker** solve a puzzle that had baffled humankind for millennia, **strengthening Britannia's command over the waves** along the way. And if that's not enough, we have amazing tales from the Dark Ages (*p65*) and World War II (*p52*), plus compelling photos of Native Americans (*p46*).

Be sure to **write in a tell us what you've thought of the issue**, we love to hear from you. Happy reading!



Cleopatra lived closer to the present day than to the time when the Great Pyramid of Giza was built

Paul McGuinness
Editor

Don't miss our February issue, on sale 4 February 2016

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ON THE COVER

Your key to the big stories...



THIS MONTH WE'VE LEARNED...

7
Age at which male Spartan children were placed into the care of the military. *See page 82.*

10,000
The height in feet that German teenager Juliane Koepcke fell from a passenger jet into the Peruvian Amazon rainforest – and survived. *See page 71.*

42
Ideal diameter, in feet, of a circus ring, as worked out by Philip Astley in the 18th century. *See page 14.*

ON THE COVER: ALAMY X1, BRIDGEMAN IMAGES X1, GETTY X3, REX X1, ISTOCK X5, LIBRARY OF CONGRESS X1, COVER IMAGE ENHANCEMENT - CHRISSTOCKERDESIGN.CO.UK / ON THIS PAGE: ALAMY X1



THIS MONTH'S

BIG STORY

26 PHARAOHS OF EGYPT

The all-powerful mortals revered as divine deities

39 The many faces of Egypt's most famous daughter: Cleopatra

65 Charlemagne's Christmas present – the crown of the Holy Roman Empire

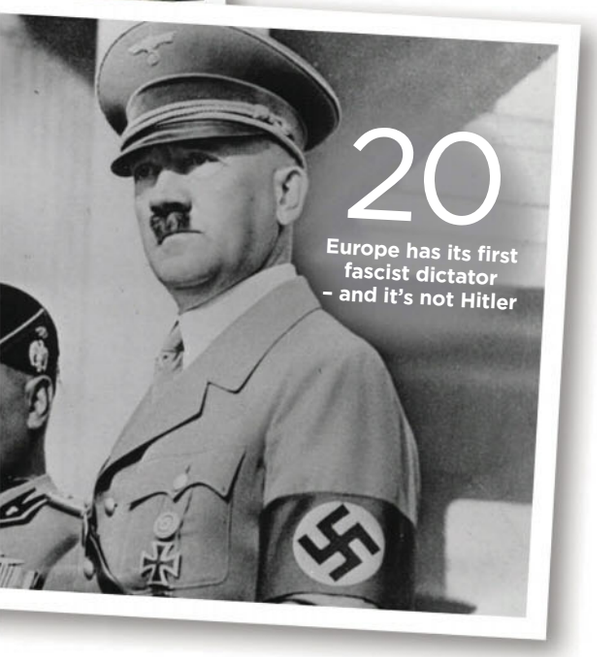
46 A stunning insight into Native American tribes of the 20th century

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72 How John Harrison's masterpiece clocks went to sea and saved lives



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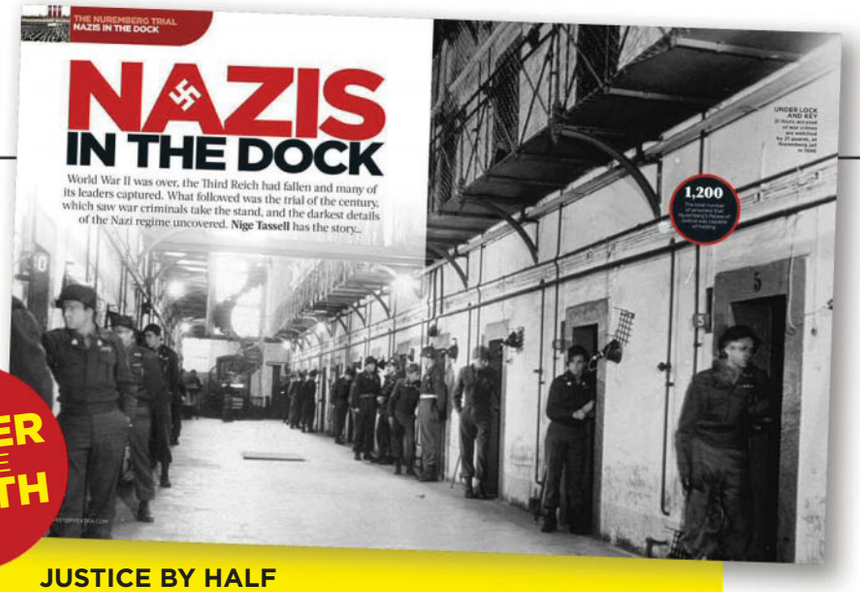
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READERS' LETTERS

Get in touch – share your opinions on history and our magazine



LETTER OF THE MONTH

JUSTICE BY HALF

For Susan, the Nazis weren't the only ones who should have been in the dock after World War II

HYPOCRITICAL JUSTICE?

As I was reading the article about the Nuremberg Trials (Nazis in the Dock, November 2015), I could not stop thinking: "What hypocrisy!"

US prosecutor Robert H Jackson described Fritz Sauckel, Nazi Commander of Forced Labour, as "the cruellest slaver since the Pharaohs". He did not need to look so far back in time. The cruelty of American and British slavery would have been a much closer example. At the time of the trials, there was still segregation in the United States, and the lynching of black people by white citizens was a non-punishable offence.

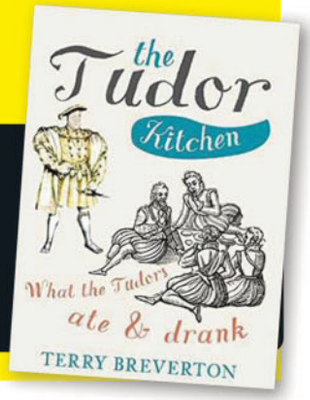
The 'Butcher of Lyon', former SS officer Klaus Barbie – who was hired by US intelligence after the war and later escaped to Bolivia to avoid extradition to France – was accused of being responsible for some 14,000 civilian deaths. US President Harry S Truman was responsible for some 300,000 civilian deaths in Hiroshima and Nagasaki, yet was never prosecuted – though he did order the execution of the Japanese generals after their surrender.

"Truman was responsible for some 300,000 civilian deaths, yet was never prosecuted"

The British were not much better. Some 24,000 people starved to death in British concentration camps after the Second Boer War in 1902. No British leader lost their heads over it, not to mention all the other deaths initiated by the hugely over-rated former British PM, Winston Churchill.

Susan Sabo,
via email

Susan wins a copy of *The Tudor Kitchen: What the Tudors Ate and Drank*, by Terry Breverton, published by Amberley Publishing, worth £20. Ever wondered what Elizabeth I's first meal after the Spanish Armada was, or what Henry VIII's favourite pies were? Breverton's book holds these answers and many more...



Great feature on my historical heroine Eleanor of Aquitaine in this month's @HistoryRevMag
@LynneKearns

ETERNAL YOUTH

I was very interested to read your note on Countess Báthory as a serial killer in issue 24 (History's 50 Most Infamous Villains, Christmas 2015). Báthory was dispossessed of her own castle at Csethe in Hungary (now Čachtice in Slovakia – today only the cellars remain) and bricked up in her room. Her trial, however, was driven by politics and superstition.

The Báthory family crest was bordered by the image of the 'ouroboros', an alchemical symbol derived from the image of a dragon eating its own tail, which designates infinity. Alchemists had long sought the 'elixir vital' – the secret of eternal life.

Countess Elizabeth Báthory is supposed to have bathed in her victims' blood, in order to achieve eternal youth.

Nick Warren,
Greater London



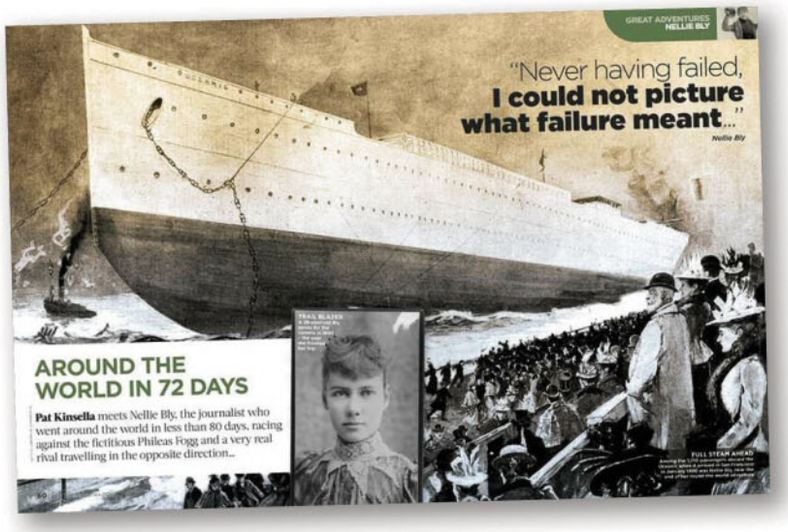
Love the magazine! I read it cover to cover, most times I have to fight the kids to read it first!
Aimee Round

GREAT STUFF

I've just bought the December 2015 issue. There is so much good material, the articles on Rome (The Big Story) and Joseph Stalin (History Makers) took some beating. But Coco Before Chanel (The Reel Story) and Nellie Bly (Great Adventure) were the surprise packages, highlighting the achievements of two determined women.

KILLER COUNTESS

Báthory came in at number 40 in our list of notorious villains



For future features, I would love to see an article on the Brontë sisters. Also something on the Siege of Colchester, which took place during the English Civil War in 1648.

Keep up the good work.

Malcolm Waterton,
via email

Editor replies:
Thanks for the wonderful feedback, Malcolm, and for the cracking feature ideas.

November issue just arrived in the post and a nice cup of tea. What could be better! @martwbel

PEPYS' LEGACY

I have heard of Samuel Pepys and his diary many times, but I have to admit, I'd never really heard very much about the man himself, nor had it occurred to me how incredible it was that he recorded some of the most groundbreaking events of the 17th century, until I read your feature (Pepys' Show, Christmas 2015).

I was very much inspired by Margarette Lincoln's words in her interview – she has made me realise just how valuable his journals are, and now I'm of a mind to see them. Could you tell me, is it possible to go and see the original volumes at the Pepys Library in the University of Cambridge?

Edgar Claybourne,
Suffolk

Editor replies:
It certainly is possible to go to The Pepys Library and look at the great man's diaries – you can also see the rest of the treasures the diarist left to the University, including some rare medieval manuscripts. Check the website (*www.magd.cam.ac.uk/pepys*) for opening times.



IN THE MIX

I am enjoying my subscription to *History Revealed*, particularly the wide range of features. I hope you keep the present mix, perhaps with a few of the longer articles concentrating on sciences and the arts, or the economy, in a historical context. Thank you again.

John McTear,
Cornwall

ROLE MODEL

After reading about the voyage of a 19th-century journalist and trailblazer in your December 2015 issue, I have a new hero – or rather, heroine! Nellie Bly's round-the-world trip (Great Adventures) was extraordinary. This bold young woman really broke out of the patriarchy in which she was raised to achieve something great – and before any man. She seems to have had the same sort of pioneering spirit that Amelia Earhart had – a woman I also greatly admire. Thank you for sharing Bly's tale.

Rosalind Smith,
via email

Loving the @HistoryRevMag. A really great read. @Melmz23

ARE YOU A WINNER?

The lucky winners of the crossword from issue 23 are:
A Allport, Berkshire
Paul Balley, Buckinghamshire
A Redmore, Bristol
Congratulations! You have each won a copy of ***Voices From the Front*** by Peter Hart, worth £25.
To test those little grey cells with this month's crossword, turn to page 96.

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UP CLOSE
Edgar is off to see Pepys' hand-written diaries

GREAT ADVENTURER
The story of 25-year-old Nellie Bly's trip around the world struck a chord with a few readers

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SNAPSHOT

1915 FOOTY ON THE FLOE

As long as *Endurance* is held fast in pack ice, Sir Ernest Shackleton's latest expedition to cross the Antarctic is going nowhere. The crew, therefore, have to think up ways to keep themselves entertained, from sing-songs to kick-abouts on the floe.

But since being first stuck in January 1915, the ship never breaks free and the fun and games stop when it is eventually crushed by the ice that October. From then on, Shackleton and the 27 other men have to rely on a different kind of endurance if they are going to survive being all alone with limited supplies in the frozen tundra.



GETTY







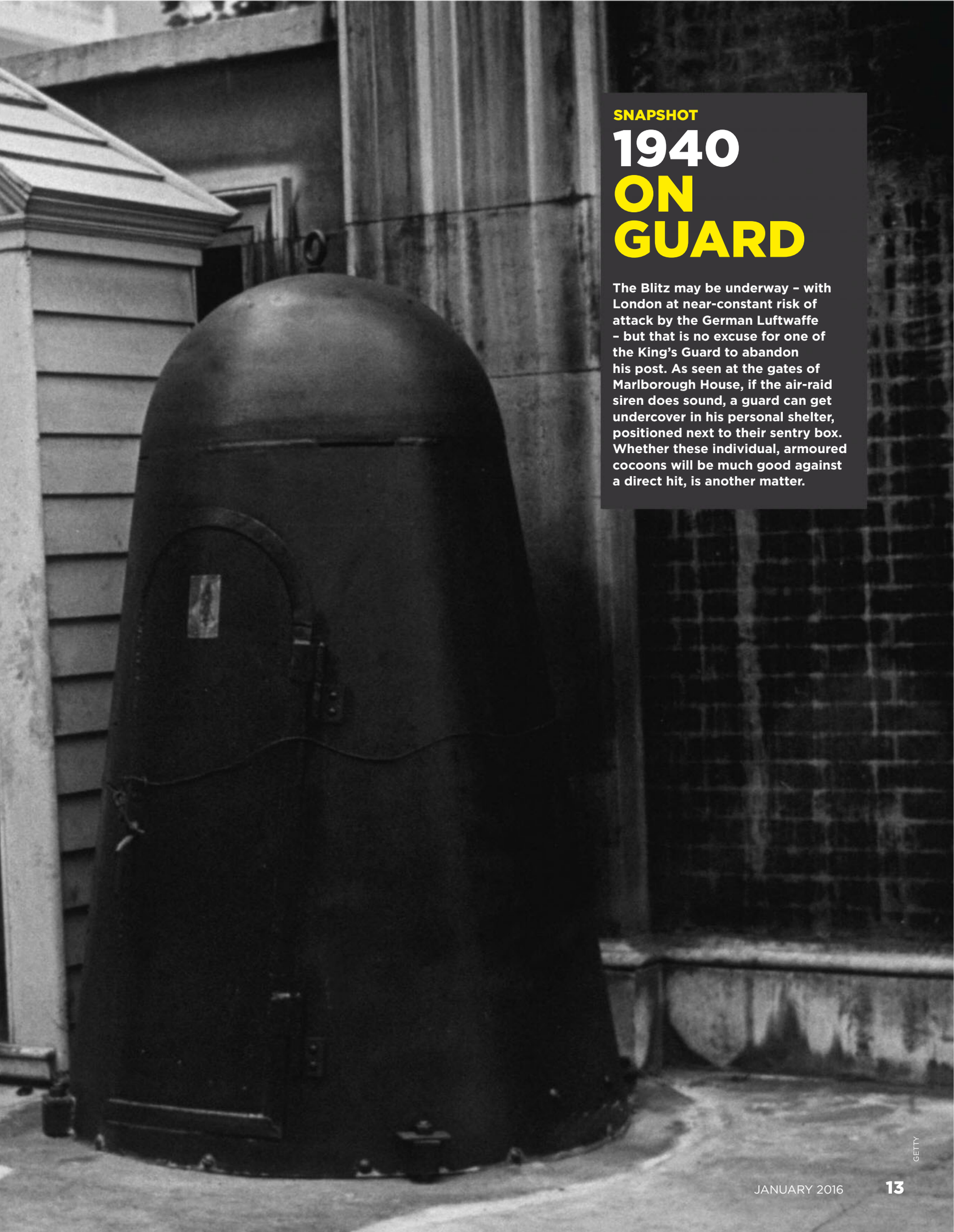
SNAPSHOT

1928 SPORTS CARS

The horses have been replaced by horsepower in the fast, frantic and frankly dangerous sport of automobile polo. Popularised in the United States in the early 20th century, the rules are simple. A team is made up of two cars – stripped down of all nonessentials like doors, roofs or windshields – each carrying two players, a driver and a malletman. The aim is to hit a basketball with a heavy croquet mallet into the opposition goal, but this is easier said than done as the cars are tearing around the pitch at 40mph. Spectacular crashes are frequent, as are broken bones.

GETTY





SNAPSHOT

1940 ON GUARD

The Blitz may be underway – with London at near-constant risk of attack by the German Luftwaffe – but that is no excuse for one of the King's Guard to abandon his post. As seen at the gates of Marlborough House, if the air-raid siren does sound, a guard can get undercover in his personal shelter, positioned next to their sentry box. Whether these individual, armoured cocoons will be much good against a direct hit, is another matter.

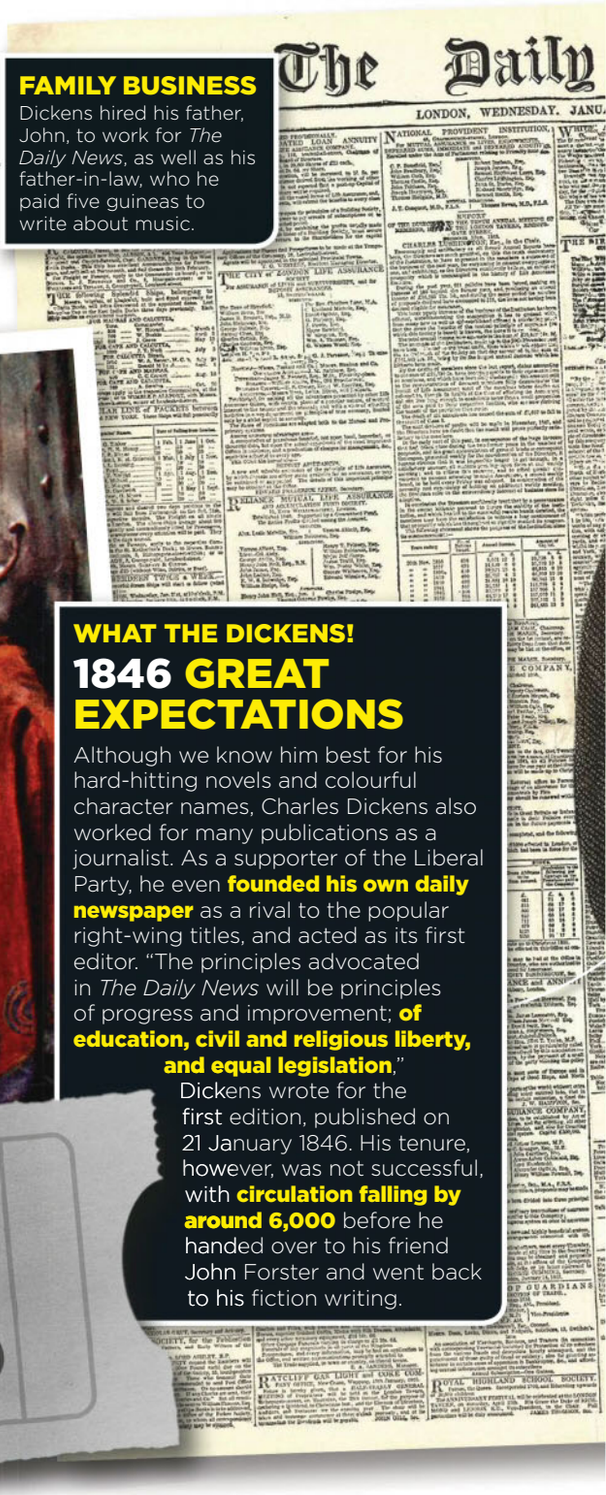
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"I READ THE NEWS TODAY..."

Weird and wonderful, it all happened in **January**

FAMILY BUSINESS

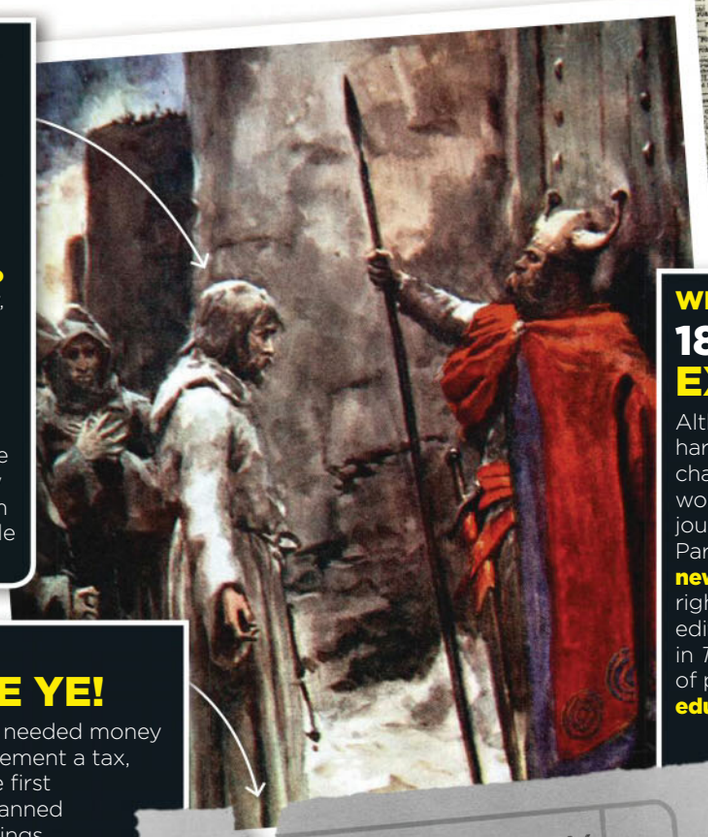
Dickens hired his father, John, to work for *The Daily News*, as well as his father-in-law, who he paid five guineas to write about music.



CANOSSA COME IN?

1077 PROVING PAPAL POWER

A simple apology was not going to be enough for the Pope to lift his excommunication of Holy Roman Emperor Henry IV. Before he could be granted forgiveness, **Henry had to trek nearly 500 miles** from Germany, to Canossa Castle in northern Italy, which involved crossing the Alps. He allegedly made parts of the journey **barefoot and wearing a hairshirt** as extra proof of his penance. And if he thought his ordeal would end once he arrived in January 1077, he was sorely mistaken. Pope Gregory VII made him wait, kneeling, at the gate to the castle for three days – **during a blizzard**.



WHAT THE DICKENS!

1846 GREAT EXPECTATIONS

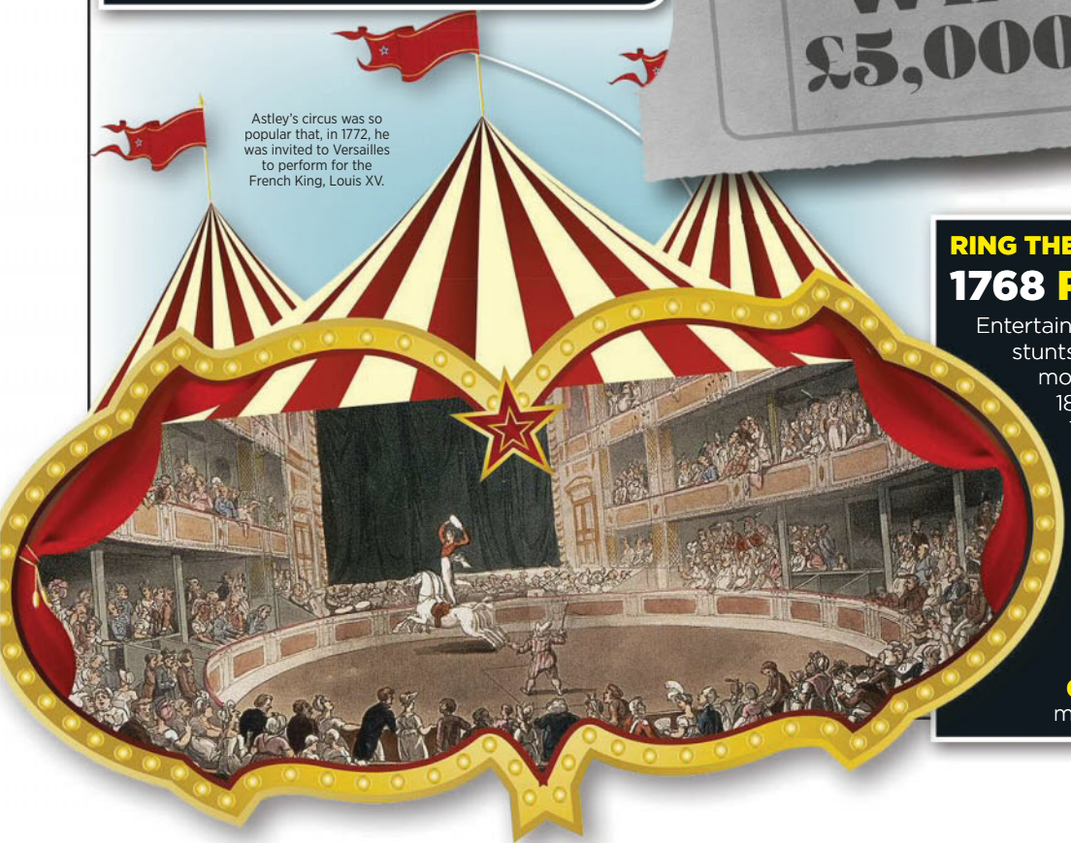
Although we know him best for his hard-hitting novels and colourful character names, Charles Dickens also worked for many publications as a journalist. As a supporter of the Liberal Party, he even **founded his own daily newspaper** as a rival to the popular right-wing titles, and acted as its first editor. "The principles advocated in *The Daily News* will be principles of progress and improvement; **of education, civil and religious liberty, and equal legislation**," Dickens wrote for the first edition, published on 21 January 1846. His tenure, however, was not successful, with **circulation falling by around 6,000** before he handed over to his friend John Forster and went back to his fiction writing.

LIZZIE'S LOST LOTTERY

1569 IT COULD BE YE!

The year was 1566 and Elizabeth I needed money for the realm, but rather than implement a tax, she decided to hold a lottery – the first of its kind in Britain. The Queen planned 400,000 lots to be sold, at 10 shillings each, in the hope of **winning the jackpot of £5,000 (about £850,000 today)**. The draw didn't take place until January 1569, however, due to a lack of support. It would be 1750 before the next lottery was held.



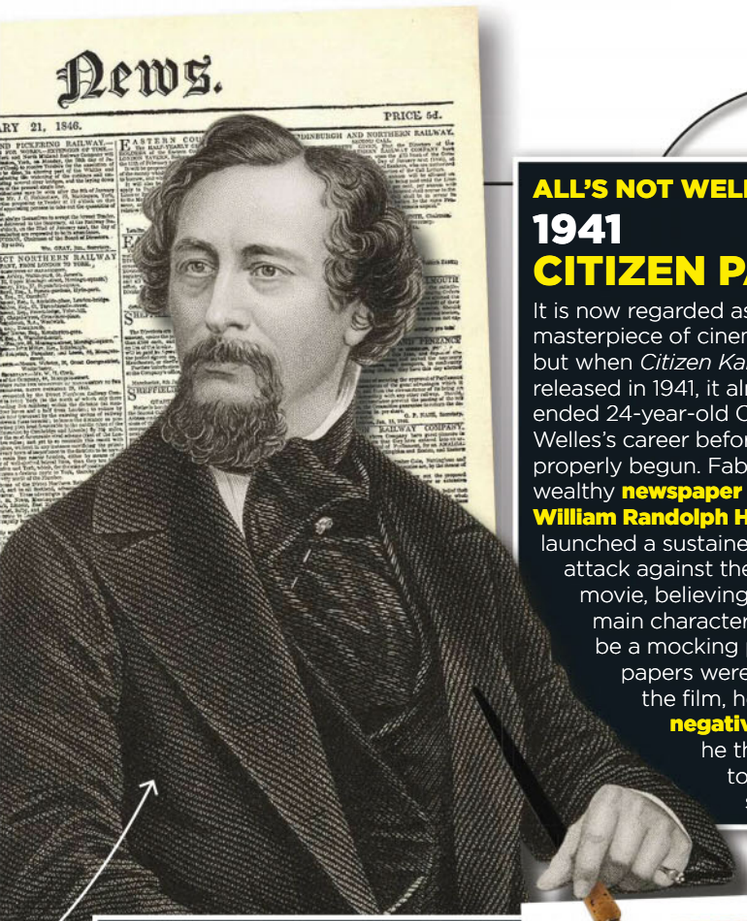


Astley's circus was so popular that, in 1772, he was invited to Versailles to perform for the French King, Louis XV.

RING THE CHANGES

1768 ROLL UP! ROLL UP!

Entertaining audiences with trained animals, acrobatic stunts and clowns may go back to antiquity, but the modern image of a circus only originated in the 18th century, thanks to Englishman Philip Astley. The former cavalry sergeant major was a singularly gifted horse rider, but realised he could achieve even more spectacular feats if his steed ran in a circle, rather than a long line as was the norm, as **the centrifugal force would keep him from falling off**. He put this to the test on 9 January 1768 by standing up on the saddle while riding, to rapturous applause. Over the next couple of years, Astley perfected his act – calculating that the **ideal diameter of the ring should be 42 feet (nearly 13 metres)** – as well as adding clowns, musicians and a roof to his amphitheatre.





ALL'S NOT WELL

1941 CITIZEN PAIN

It is now regarded as a masterpiece of cinema, but when *Citizen Kane* was released in 1941, it almost ended 24-year-old Orson Welles's career before it had properly begun. Fabulously wealthy **newspaper tycoon William Randolph Hearst** launched a sustained attack against the movie, believing the main character, Charles Foster Kane, to be a mocking portrait of himself. His papers weren't allowed to mention the film, he **attempted to buy the negative so he could burn it** and he threatened cinemas not to show it. All without ever seeing the film.

NEVER-ENDING PIE

AD 909 GETTING TO THE MEAT

As well as being Bulgaria's patron saint, John of Rila is also honoured as the saint looking after pies and pie makers. This goes back to a **mythical miracle** when the hermit monk – who lived in a mountainous cave, surviving off what food he could scavenge in the wilderness – **appeared in a village, bearing two pies**. They had been given to him by the local pie-maker (his last two) and so he was able to feed the poor. And while it may not exactly be the feeding of the 5,000, the event is still celebrated every 23 January.



"...OH BOY"

January events that changed the world

24 JANUARY AD 41
SEE YOU CALIGULATER
The sadistic and tyrannical Roman Emperor, Caligula, is assassinated.

8 JANUARY AD 871
VANQUISHING THE VIKINGS
When still just 21, Alfred the Great wins a decisive victory for the Anglo-Saxons against the Danes at Ashdown.

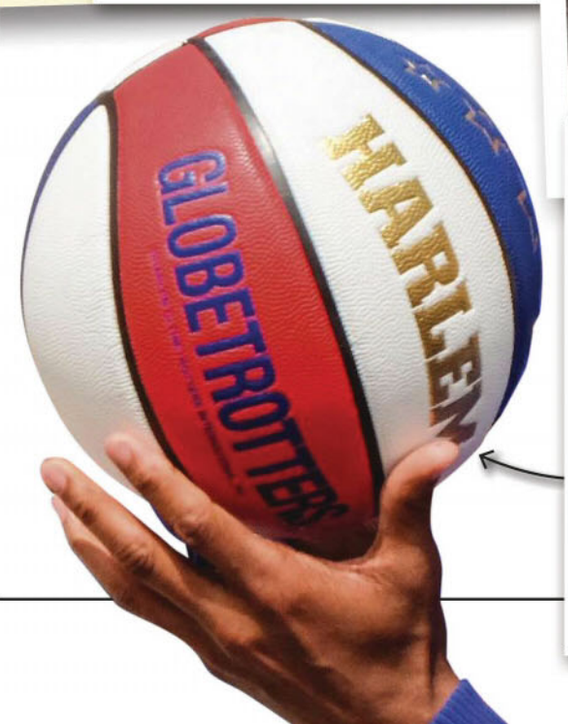
20 JANUARY 1265
SIMON SAYS...
After seizing power in England, Simon de Montfort calls for what will be a ground-breaking parliament.

26 JANUARY 1500
TOUCH OF BRAZILIAN FLAIR
Spaniard Vicente Yáñez Pinzón – who sailed with Columbus – sights Brazil.

9 JANUARY 1806
NELSON'S SOLEMN END
Hero of the Battle of Trafalgar, Horatio Nelson, is buried at St Paul's Cathedral.

25 JANUARY 1924
SOLID GOLD IN THE SNOW
The first Winter Olympics, consisting of 16 events, takes off in the French Alps.

1 JANUARY 1959
BIG BAD BATISTA BOOTED
Cuban President Fulgencio Batista is ousted by Fidel Castro's rebel army.



HARLEM GOES GLOBE TROTTING

1927 A SLAM DUNK SENSATION

At a time when only white men could play professional basketball, sports promoter Abe Saperstein decided to buy a team made up of black players. **He re-named his 'Big Savoy Five' the Harlem Globetrotters** (after an African-American district of New York) despite being from Chicago, and they played their first game on 7 January 1927. From that night in front of some 300 people in the small Illinois town of Hinckley, they went on to win a staggering **101 games out of their 117 that season** – and things only went up from there. With their handling skills and court antics, they are now truly globe trotting as one of sport's most famous teams.

AND FINALLY...

In order to make it easier to get hold of money abroad, a banker named Robert Herries devised a **new scheme – 'circular notes'**. First issued on 1 January 1772, they were the forerunner to the traveller's cheque, which allowed rich, young men embarking on the 'Grand Tour' of Europe to access funds in 90 cities.

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Daily Mirror

4d. Thursday, January 5, 1967 No. 19,605

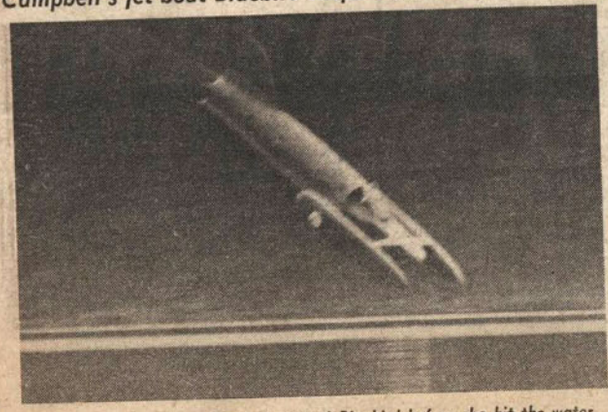
Bluebird begins her take-off to disaster.. over the radio comes Campbell's last anguished cry

I'M GOING!



WATERY GRAVE
The body of Donald Campbell remained at the **bottom of Coniston Water for 34 years**, before being recovered and given a proper burial in 2001. The ceremony, however, took place on 12 September, so was overshadowed by the 9/11 attacks.

d Campbell's jet boat Bluebird leaps from the water at 310 m.p.h. Her engine screams in her death throes before she plunges back.



Plunge to doom . . . The last view of Bluebird before she hit the water

DEATH CHEATS HIM OF FINAL TRIUMPH

A SCENE of terrible beauty — heralding death and destruction— is pictured above.

Against a darkened sky and out of smooth water, jetboat Bluebird hurtles up—almost like a jetliner gracefully taking off.

Many feet above the waters of Lake Coniston, she was suspended for a fraction of time almost on her tail, her engine still screaming.

Then she somersaulted back in a welter of foam. And down to the depths with her, trapped in the shattered hull, went Donald Campbell, a death - defying speedman whom death had caught up with at last.

Only a second before, Campbell's cry had come over the radio: "I'm going!"

Those were the last words of the world's fastest man on water —who died yesterday trying to break his own record of 276.33 m p h.

He was on the point of triumph. Bluebird was zooming at 310 m p h on her second run over the measured kilometre . . . and in another second would have completed the course.

But her nose lifted too far out of the water, the wind pressure built up underneath and the thing Campbell feared most happened —Bluebird became airborne.

Last night Campbell's body still lay in shattered Bluebird on the bed of Coniston Water. Navy divers and frogmen will try to recover it today.

T V Protest—Back Page. What the Mirror Says—Page 2.
Full Story and More Pictures—Page 5 and the Centre Pages.

JOHN FROST NEWSPAPERS X1, GETTY X2

YESTERDAY'S PAPERS

On **5 January 1967**, the last words of Donald Campbell made the front page

"SHE'S GIVING A HELL OF A BLOODY ROW IN HERE" CAMPBELL

Less than 200 metres and a mere fraction of a second from the end of his latest water speed record attempt, English daredevil Donald Campbell lost control of his jet-propelled hydroplane.

As his *Bluebird K7* hurtled along Coniston Water well in excess of 300mph, its nose lifted off the dark, calm surface, sending the craft into an acrobatic somersault 15 metres into the air before crashing down. It disintegrated on impact, killing Campbell instantly.

The dashing (in every sense of the word) Campbell had grown up racing not only boats but cars as well, emulating his father, Malcolm. In the 1950s, he broke the water speed record in *Bluebird K7* on six occasions, four of them on Coniston. His greatest year, however, was in 1964, when he held the record for both land and water – an achievement yet to be repeated. He began by racing to 403.1mph in his land *Bluebird CN7* and followed it, on the last day of the year, by hitting 276.33mph on the water.

It was this latter speed he was attempting to better on his fatal last run on 4 January 1967, and to everyone watching on that cold, wet morning in the moments before the wreck, he looked like he was going to smash the record.

Although there is still no definitive cause for the crash, it is thought that by pushing the ageing *Bluebird* to untested speeds, it lost all stability. In the split second when the 46-year-old knew his life was about to end, his final words could be heard by helpless onlookers over the radio: "I'm going!"



SPEEDSTER'S SUPERSTITIONS

A highly superstitious man, Campbell wouldn't race without **his teddy bear, Mr Whoppit**. In the wake of the crash, the mascot was found straight away by Campbell's distraught, long-serving mechanic, Leo Villa.

LOST AT CONISTON

Navy experts (right) search Coniston Water, Cumbria, for the body of Campbell (above, seen in 1960 at one of his land speed record attempts)

1967 ALSO IN THE NEWS...

3 JANUARY When Edward Brooke takes office, he becomes the **first African American to be popularly elected** to the US Senate. The next Senator of African heritage wouldn't be elected until 1993.

12 JANUARY Hours after his death due to cancer, Dr James Bedford's body is frozen – making him the first person to be cryopreserved – in the **hope of being revived by future medical advances**.

14 JANUARY Thousands descend on San Francisco's Golden Gate Park for the historic counterculture event, **the Human Be-In**, complete with speakers, music and copious amounts of the drug LSD.

INFOGRAPHIC: ROBBIE BENNIE, NATIONAL TRUST IMAGES X3

GRAPHIC HISTORY

The organisation that protects heritage

1895 THE NATIONAL TRUST IS BORN

*On **12 January 1895**, an organisation is founded to preserve land and buildings of beauty or historic interest in England, Wales and Northern Ireland*

RESERVED BY NATURE

There are **61 National Nature Reserves** on Trust land, which hosts more than **600** of the most threatened species in the UK.

978m

The altitude of the **highest peak** on National Trust land – and in all of England – **Scafell Pike** in the Lake District.

GOLD IN THE HILLS

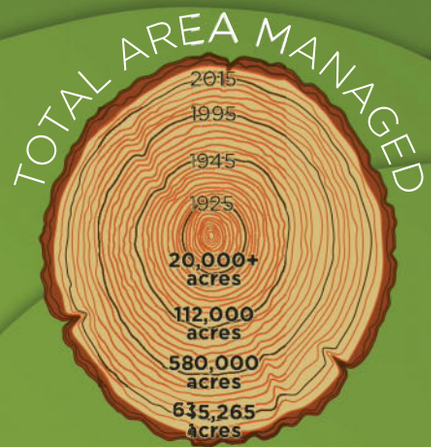
One of the Trust's **oldest industrial sites** is the **gold mine** of Dolaucothi, Carmarthenshire. The precious metal was first dug up by the **Romans** c70-80 AD.

TREE SPIRIT

The Trust owns or manages some **61,776 acres** of woodland – around **1.45%** of the total in England, Wales and Northern Ireland.

GRAVITY OF THE SITUATION

At Woolsthorpe Manor, Lincolnshire, you can still see the tree from which, it is said, **an apple fell** onto the noggin of one **Isaac Newton** in the 1660s, prompting him to mull his **theories on gravity**.



2,500 YEARS

The age of the **Ankerwycke Yew**, believed to be the **oldest tree** protected by the Trust. Rooted near Runnymede, it may have witnessed events connected with **the sealing of Magna Carta** in 1215.

1895

The Trust is founded by (L-R) Hardwicke Rawnsley, Octavia Hill and Sir Robert Hunter



1896

The Trust buys its first building. Alfriston Clergy House in Sussex – a modest, 14th-century, timber-and-thatch house – is purchased for £10.

1899

The National Trust purchases two acres of wetland in the ancient Wicken Fen near Cambridge – its first nature reserve.

1902

In a bid to raise funds to buy Brandelhow on Derwentwater, the Trust develops its first nationwide campaign. It is supported by royals and factory workers alike.

1907

The first National Trust Act is passed, further protecting the property the Trust holds and preserves.

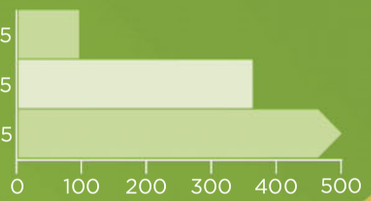


HOT SPOT

The second **most visited** Trust site (after the Giant's Causeway, County Antrim) is Stourhead, Wiltshire. In 2014-15, **405,572** visitors popped by.

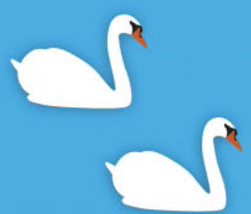
OVER 500 HISTORIC PLACES

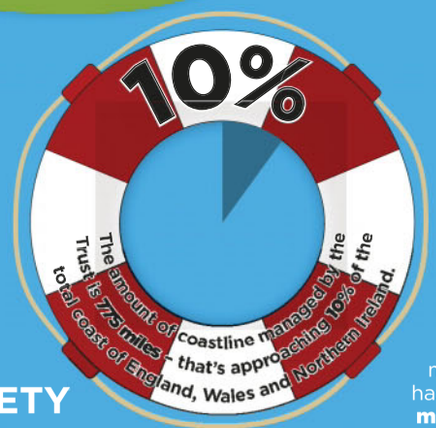
Between the Trust's houses, gardens, mines, mills, nature reserves, castles, chapels, monuments and lighthouses, the organisation has long provided plenty of places to visit...

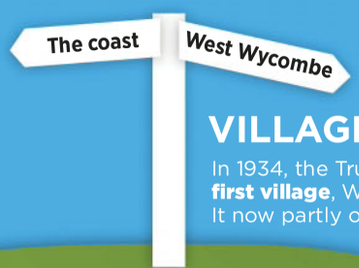


OPERATION NEPTUNE

In 1965, the Trust launched a drive to acquire and protect **threatened areas of coast** – since then, the Neptune Coastal Campaign has raised over **£45 million** for the cause.







VILLAGE PRESERVATION SOCIETY

In 1934, the Trust undertook the protection of its **first village**, West Wycombe in Buckinghamshire. It now partly or completely owns **56 villages**.

With 4.2 million members, the Trust has **6.5 times as many members** as the **UK's five biggest political parties** combined.

MEMBERSHIP



1923

The Lake District mountain Great Gable is given to the Trust by the Fell and Rock Climbing Club as a memorial to its members killed in WWI.

1927

The Trust buys the 1,400-acre Stonehenge Down to prevent construction. It now cares for about one-third of the Stonehenge World Heritage Site.

1929

Supported by funds from author Beatrix Potter, who uses her income to support work in the Lake District, the Trust obtains 4,000 acres near Coniston Water.

1931

The National Trust for Scotland is established, with a similar remit and powers.

1939

The Trust begins its work with key industrial sites when it is gifted Quarry Bank Mill and Styal Village in Cheshire.

1967

The first Acorn Camps offer working holidays for young people. Thousands have since enjoyed the Trust's volunteering vacations.

WHAT HAPPENED NEXT?

How Mussolini went from Italy's Prime Minister to the totalitarian 'Il Duce'

1925 BENITO MUSSOLINI IS THE FIRST FASCIST DICTATOR

At the beginning of 1925, Mussolini turned potentially strong political opposition to his fascist regime into the ideal opportunity to consolidate his power...

Although he had been effectively ruling Italy as dictator for two years, the charismatic and callous leader of the Fascist Party, Benito Mussolini, was still (technically) operating within a democracy as 1924 ended. But that illusion was finally and swiftly dispensed with when he addressed the Parliament on 3 January 1925. "I declare... that I alone assume the political, moral and historic responsibility for everything that has happened. Italy wants peace and quiet, work and calm. I will give these things with love if possible, and with force if necessary," he declared. The message was clear: fascism in the 20th century had its first dictator.

POWERFUL AND HYPNOTIC

Yet at the start of his career, Mussolini was on the other end of the spectrum as an ardent socialist. His transformation took place during World War I, where he was wounded serving with the *bersaglieri* (sharpshooters) before returning home a committed anti-socialist. In the wake of the war, Italy was suffering and its people looked for a strong leader to unite them. Powerfully built and with an almost hypnotic oratorical style, Mussolini – like Hitler in Germany – was soon regarded as the saviour of the nation as the head of his newly created Fascist Party. He wasted no time securing his own position while using his supporters, the 'Blackshirts', to intimidate, terrorise and even kill opponents.

Then in October 1922 – by which time, the Fascists controlled huge parts of the country – tens of thousands of the Fascist Party marched on Rome, demanding Mussolini be 'invited' to form a government. King Emmanuel III willingly consented, allowing the megalomaniac Mussolini to be named Prime Minister at the age of 39, the youngest in Italian history.

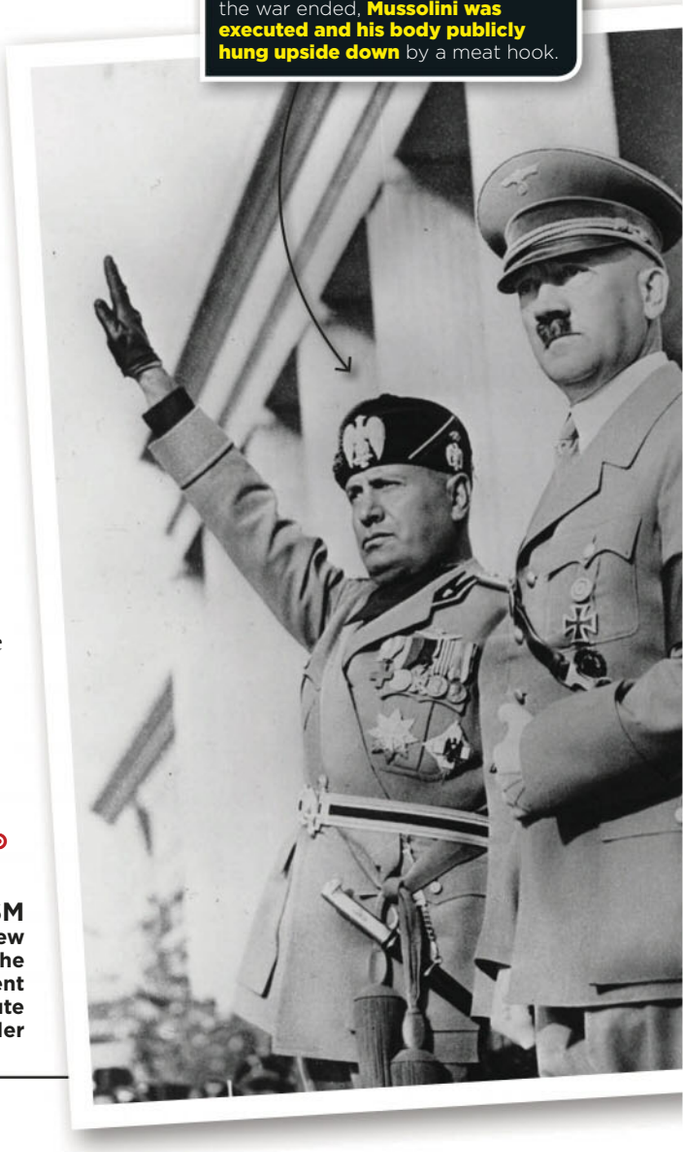
GOLDEN OPPORTUNITY

The next year, he pushed through the Acerbo law, meaning his party would have an overwhelming majority in Parliament, while clamping down on free press and speech and implementing a police state. The thuggish behaviour of his Blackshirts continued unabated – that is, until Mussolini's strongest critic and one of Italy's most popular socialist figures, Giacomo Matteotti, was kidnapped and assassinated in 1924. The furore over the murder came close to threatening Mussolini's regime, but it was his opponents who handed him a golden opportunity.

They made the misjudged protest of boycotting Parliament, meaning there was no dissenting voice left. Mussolini was free to address what remained of the body, take responsibility for Blackshirt violence and proclaim Italy a Fascist state, with him as 'Il Duce' (The Leader). From then, Mussolini acted on what he believed to be his destiny to forge a new Roman Empire, which led to invading Ethiopia in the 1930s and allying with Hitler in World War II.

UNEQUAL ALLIES

Throughout World War II, Mussolini failed to achieve equal footing with his German ally, Adolf Hitler. Not long after the Allies invaded Italy in 1943, he was arrested and, before the war ended, **Mussolini was executed and his body publicly hung upside down** by a meat hook.

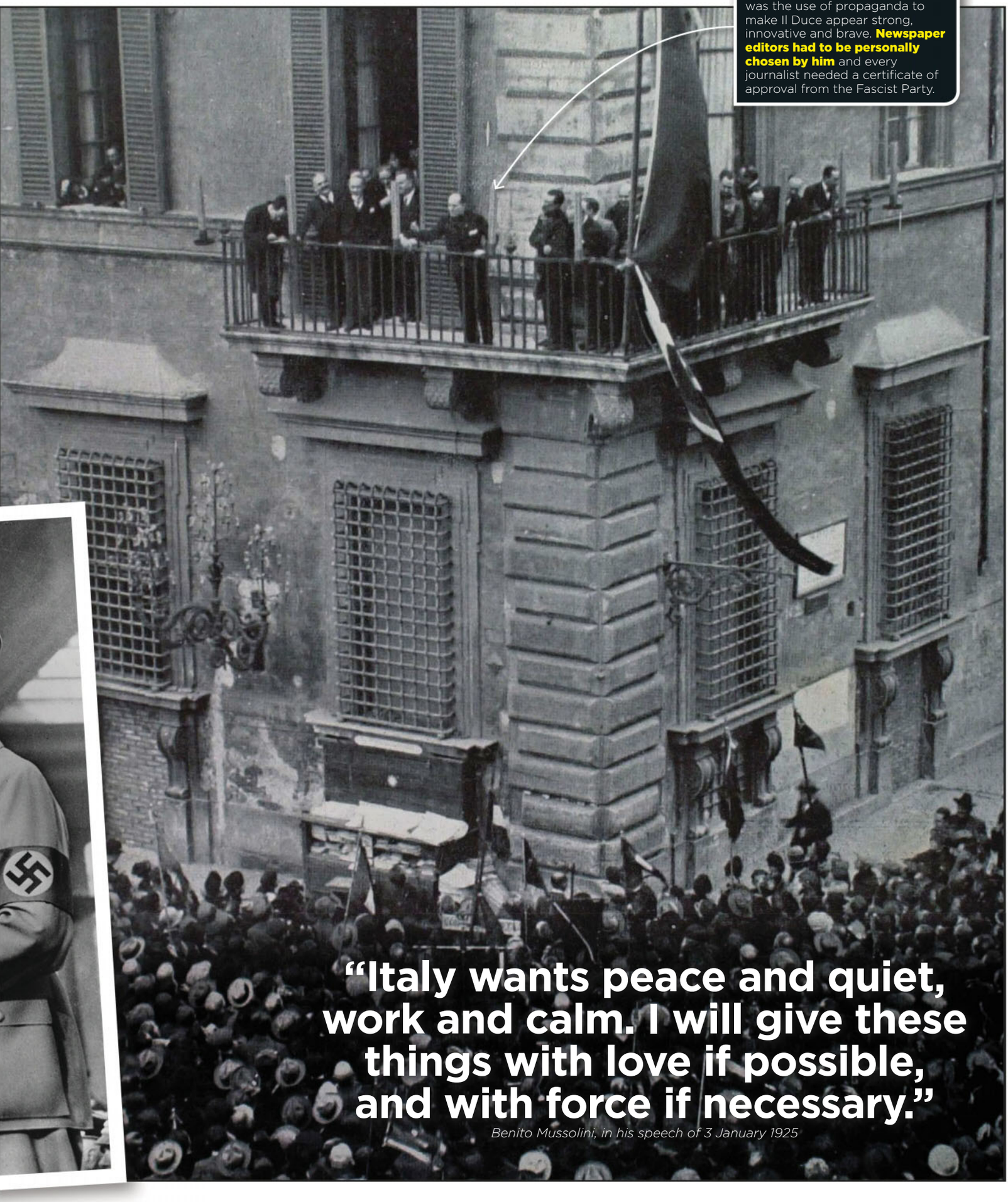


THE FACES OF FASCISM

MAIN: **In March 1925, the new dictator of Italy celebrates the sixth year of his fascist movement**

RIGHT: **Mussolini gives the Nazi salute while standing next to Adolf Hitler**

ALAMY X1, GETTY X1



IL DUCE, LET LOOSE

A key facet of Mussolini's regime was the use of propaganda to make Il Duce appear strong, innovative and brave. **Newspaper editors had to be personally chosen by him** and every journalist needed a certificate of approval from the Fascist Party.

"Italy wants peace and quiet, work and calm. I will give these things with love if possible, and with force if necessary."

Benito Mussolini, in his speech of 3 January 1925

THE EXTRAORDINARY TALE OF...

Perhaps history's greatest all-round sportsperson, **Jim Thorpe**

1913 DOUBLE OLYMPIC CHAMPION FORCED TO GIVE UP HIS GOLD MEDALS

His awe-inspiring performances saw him race to glory, but something from Jim Thorpe's past was about to dull the shine of his golden Olympics...

American athlete Jim Thorpe already had a gold medal in the bag as he aimed for victory in the showpiece of the 1912 Olympics in Stockholm, the decathlon.

Showing no signs of fatigue from the pentathlon, where he triumphed in all but one event, he got off to a solid start in the gruelling ten disciplines. By the second day, Thorpe stood in a strong position – in the table at least, if not literally. Someone had stolen his shoes, so he had to complete the remaining events wearing a mismatched pair fished out of a bin. They were different sizes and one had to be padded with extra socks, yet nevertheless, Thorpe annihilated the rest of the field, winning three events. Finishing on 8,412.95 points (almost 700 ahead of his closest rival), Thorpe had just comfortably made the world's best athletes look risibly average, but his Olympic glory wouldn't last long.

ONE-OF-A-KIND

Thorpe, born in 1888 in a humble one-room log cabin in Native American territory (what is now Oklahoma), was descended from the Sauk and Fox peoples, and could trace his heritage to the legendary warrior Black Hawk. Like his ancestor, he was strong-willed and strong-bodied, but endured a troubled childhood when he lost both his parents and his beloved twin-brother Charlie before he was a teenager. Suffering from depression, Thorpe was bounced around a number of schools until he settled at Carlisle Indian Industrial School in Pennsylvania. It was here that his one-of-a-kind sporting career was launched.

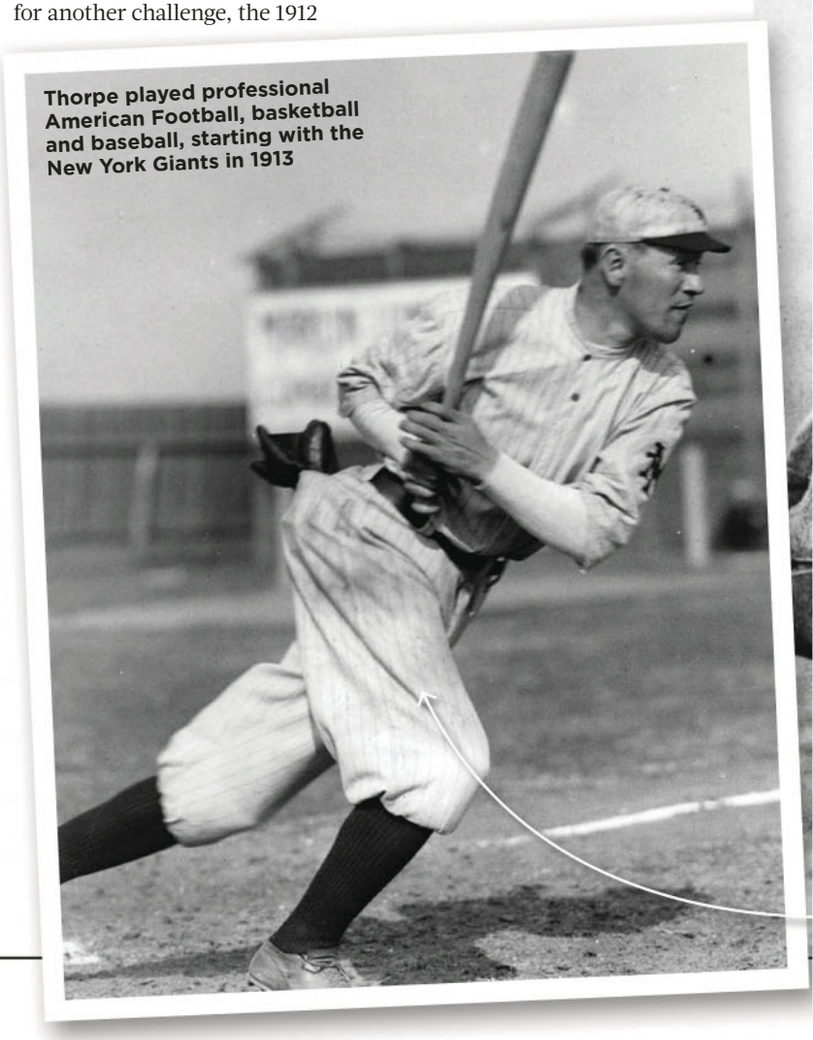
As the story goes, the 17-year-old Thorpe was watching some of the other boys during track and field when he asked if he could give the high jump a try. Despite wearing overalls, he cleared the bar at 5'9'', setting a new school record. The coach of the football team, Glen 'Pop' Warner, was so impressed that Thorpe was soon the school's sporting star, excelling at athletics, lacrosse, baseball and he even won the intercollegiate ballroom-dancing championship. Thorpe, however, was born to play American Football – he was essentially a one-man team (he was named All-American two years in a row).

THANKS KING

While dominating the football field, Thorpe was also preparing for another challenge, the 1912 Olympics in Sweden. He went on to set Stockholm alight with his performances in the pentathlon and decathlon, coming first in eight of the 15 events and establishing numerous records that would last for decades. When Sweden's King, Gustav V, awarded Thorpe his medals, he declared

"You, Sir, are the greatest athlete in the world. I would consider it an honour to shake your hand."

King Gustav V, who presented Jim Thorpe with his gold medals at the Olympics in Stockholm, 1912



Thorpe played professional American Football, basketball and baseball, starting with the New York Giants in 1913

GETTY X3

FANTASY FOOTBALL

In 1911, Thorpe scored all the points in a shock 18-15 victory over the top-ranked side from Harvard. The next season, **he led his Carlisle team to the championship** – thumping the West Point team, Army, along the way. In that match, he scored a 97-yard touchdown.



In 1915, Thorpe signed with the Canton Bulldogs football team, earning a whopping £250 a game



King Gustav V of Sweden awards the gold medal to Jim Thorpe at the 1912 Olympics

OLYMPIC MEDDLE

It wasn't until 1983, 30 years after his death, that **Thorpe's medals were reinstated**. Commemorative versions were presented to two of his children.

him to be the greatest athlete in the world, to which the bashful American replied, "Thanks, King". He returned to a hero's welcome and a ticker-tape parade.

The next year, however, it was announced that Thorpe had been stripped of his medals. An investigation had revealed that he had been paid – the paltry sum of $2 – to play a few games of baseball, which was a violation of the Olympics' amateurs-only policy. Thorpe had done nothing other athletes weren't doing, but they all used aliases while he gave his real name. It was a hammer blow to Thorpe, who wrote to the Amateur Athletic Union pleading for understanding. "I was simply an Indian schoolboy and did not know all about such things," it read, but to no effect. (The fact that he was singled out has since caused many to think Thorpe was victim of racial prejudice.)

ILLUSTRIOUS CAREER

With his amateur status revoked, it took only a week for Thorpe to be snaffled up by the New York Giants baseball team. From 1913 to 1928, when he retired at the age of 41, Thorpe played baseball, football and basketball, as well as stints in boxing, swimming and hockey. He was the inaugural President of the American Professional Football Association (the forerunner of the modern-day NFL) and helped set up an all-Native American team, the Oorang Indians.

Yet after such an illustrious career, Thorpe found it difficult to adapt to a life after sports. He struggled for many years with alcoholism and had to take odd jobs – notably as an extra in dozens of Hollywood movies, playing the stereotypical 'noble savage' Indian. But shortly before he died from heart failure in 1953, aged 64, two things happened that gave Thorpe the comforting knowledge that his legacy would endure long after he was gone. The first was in 1950, when he was selected by a panel of journalists as the 20th century's greatest American athlete so far. Then in 1951, the hit film *Jim Thorpe: All-American* was released, starring Burt Lancaster in the titular role.

Giving a definitive answer to who the greatest sportsperson is may be impossible. No debate on the subject, however, would be complete without Jim Thorpe.

BRIGHT PATH

When he was born, Thorpe was given the name Wa-Tho-Huk, meaning **'path lit by great flash of lightning'**, which can shortened to 'bright path'. It was a name fitting to the path he blazed in the world of sports.

WHAT DO YOU THINK?

Pelé, Serena, Ali, Gretzky, Thorpe – who is the 20th century's greatest sports star?

Email: **editor@historyrevealed.com**

HRP25

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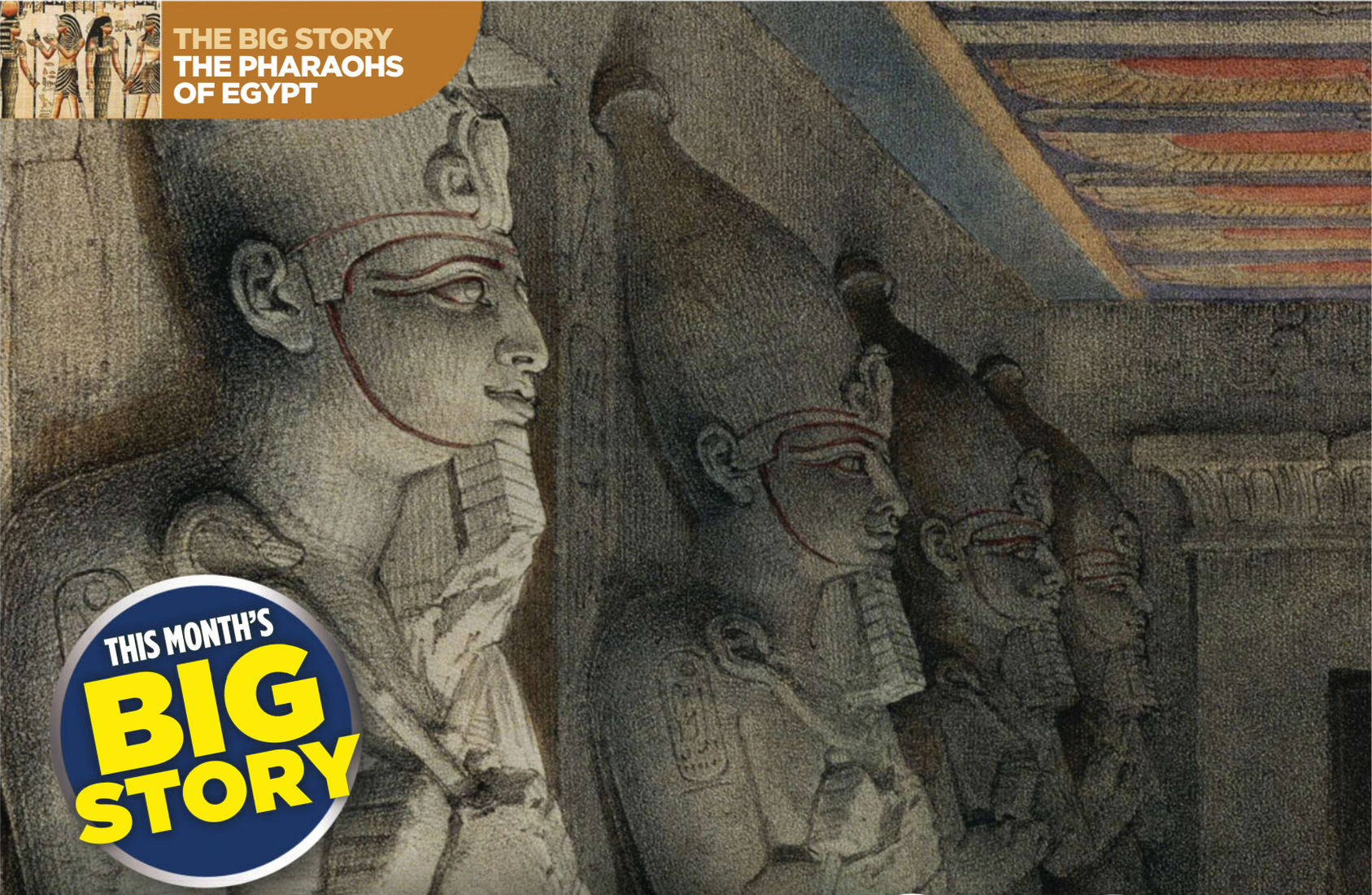
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THIS MONTH'S BIG STORY

THE PHARAOHS OF EGYPT

WHAT'S THE STORY?

Revered as divine deities as well as mortal rulers, the pharaohs of Ancient Egypt are some of the most intriguing and enigmatic rulers in history.

As the 'Lord of the Two Lands' and 'High Priest of Every Temple', pharaoh after pharaoh became the father, or mother, of their nation. With the crown came responsibility: they had to maintain peace and harmony while also expanding the lands and wealth of Egypt's vast empire.

The pharaohs were responsible for some of the most magnificent structures ever built – from the pyramids at Giza and the towering Luxor Temple, to the iconic face of the Great Sphinx and the Valley of the Kings.

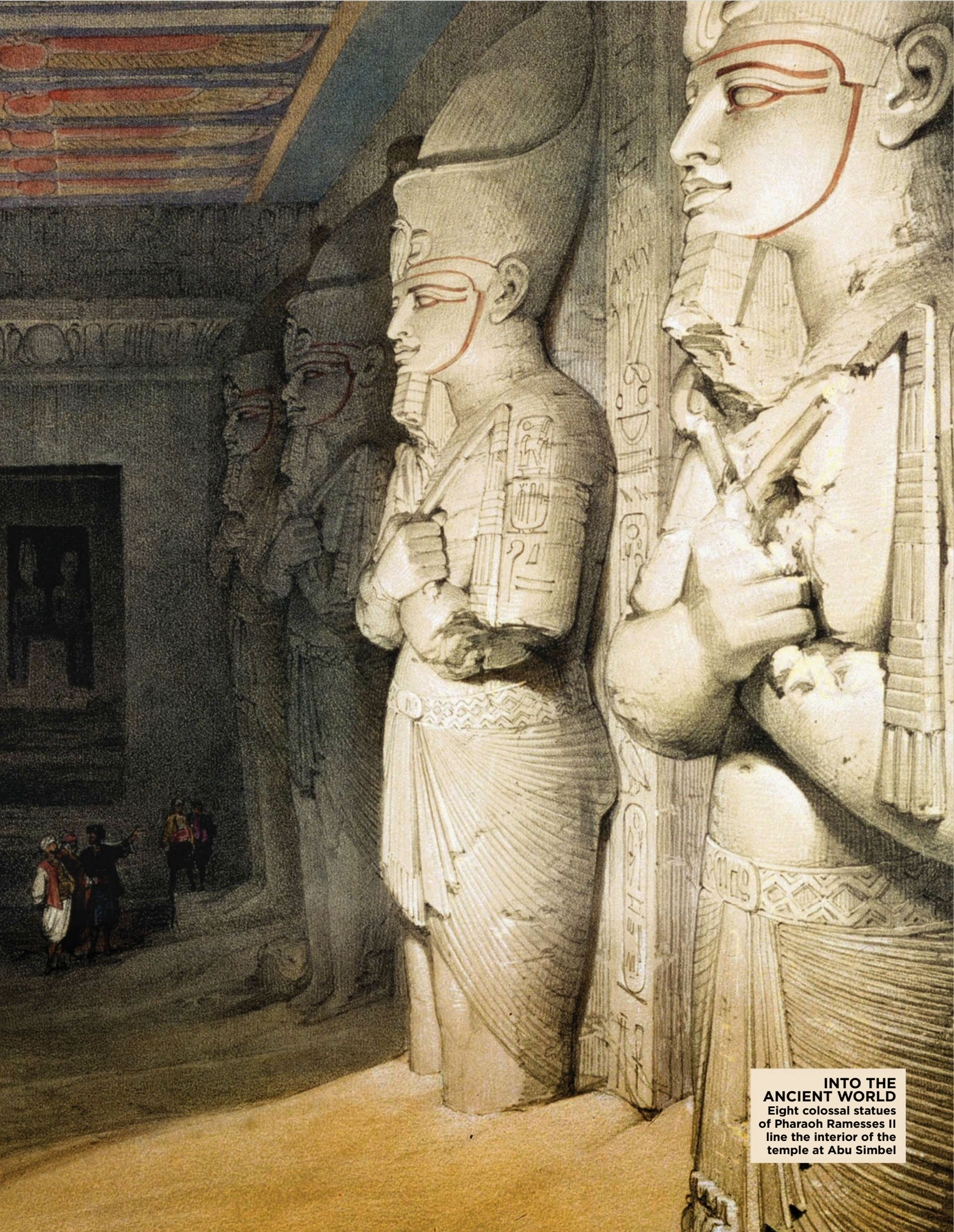
Gods or mortals, the pharaohs left behind a legacy impossible to forget, as **Lottie Goldfinch** explains...

NOW READ ON...

NEED TO KNOW

1 Life at the Top p28
2 Half-Man, Half-God p29
3 Places of Worship p30
4 The Politician p32
5 Into the Afterlife p34

ALAMY X1, ISTOCK X1



INTO THE ANCIENT WORLD
Eight colossal statues of Pharaoh Ramesses II line the interior of the temple at Abu Simbel

1

LIFE AT THE TOP

Pharaohs were all-powerful, and all-pampered...

The role of pharaoh was a very public one. Being High Priest of Egypt's temples and representative of the gods on Earth – not to mention a political leader, responsible for the secular and sacred – certainly drew some attention.

The pharaoh's day would have begun in his vast royal palace – its rooms, halls, courtyards and gardens all lavishly decorated with wall paintings, gilded furnishings and more. This was a building created to impress; suitable for a god on Earth.

A plethora of servants ensured the pharaoh had everything he required, including the impressively named 'Chief of the scented oils and pastes for rubbing his majesty's body'. Like the pharaoh's surroundings, his rich clothing, make-up and jewellery reflected his status, as did his frankincense perfume – a sacred scent used in rituals and ceremonies.

9
The age at which Tutankhamun is thought to have become a ruling pharaoh

Much of his day was spent on a throne, or *dais*, in the palace's massive audience chamber, where he would attend matters of state, receive foreign emissaries, plan new building projects, discuss military campaigns or debate the religious questions of the day – including how the pharaoh should prepare himself for afterlife.

Leisure time was also important: swimming, hunting and fishing, as well as lounging on riverboats, are all believed to have been popular pharaonic activities.

Pharaohs could have countless wives – essential for ensuring the continuation of the dynasty – with one chief spouse known as the 'King's Principle Wife'. She, together with other wives, concubines and royal children, resided in the Royal Harem, away from the royal state apartments. As well as the education and care of the royal offspring, the Harem was also responsible for court entertainment.

ALAMY X2, GETTY X2

DISCOVERY
In 2010, a **giant granite statue** of Pharaoh Taharqa was found in Dangeil, Sudan – the **furthest south** of Egypt a pharaonic statue has ever been found.



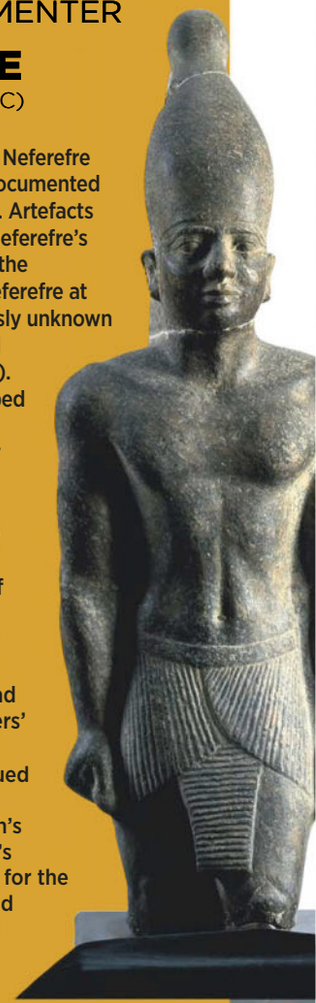
HOLY HAREM
Pharaoh Taharqa (reigned c690-64 BC) leads his wives through a festival crowd

THE GREATEST PHARAOHS

#1: THE DOCUMENTER

NEFEREFRE

(Reigned c2460-58 BC)



Ruling for just two years, Neferefre is considered the most documented ruler of the Fifth Dynasty. Artefacts and texts discovered in Neferefre's mortuary temple (inside the unfinished Pyramid of Neferefre at Abusir) revealed previously unknown facts about life in the Old Kingdom (2649-2150 BC). The 2,000 papyri, inscribed plaques and other objects from his funerary monument shed light on how royal mortuary temples were run – there was even a timetable for priests and inventories of temple equipment.

Other documents told of offerings coming into the temple (such as bread and beer) and the workers' wages. This implies that pyramid temples continued to be used for religious purposes after a pharaoh's internment. In Neferefre's case, an offering service for the deceased leader was held at the temple every day, with other festivals and rituals performed at other times.

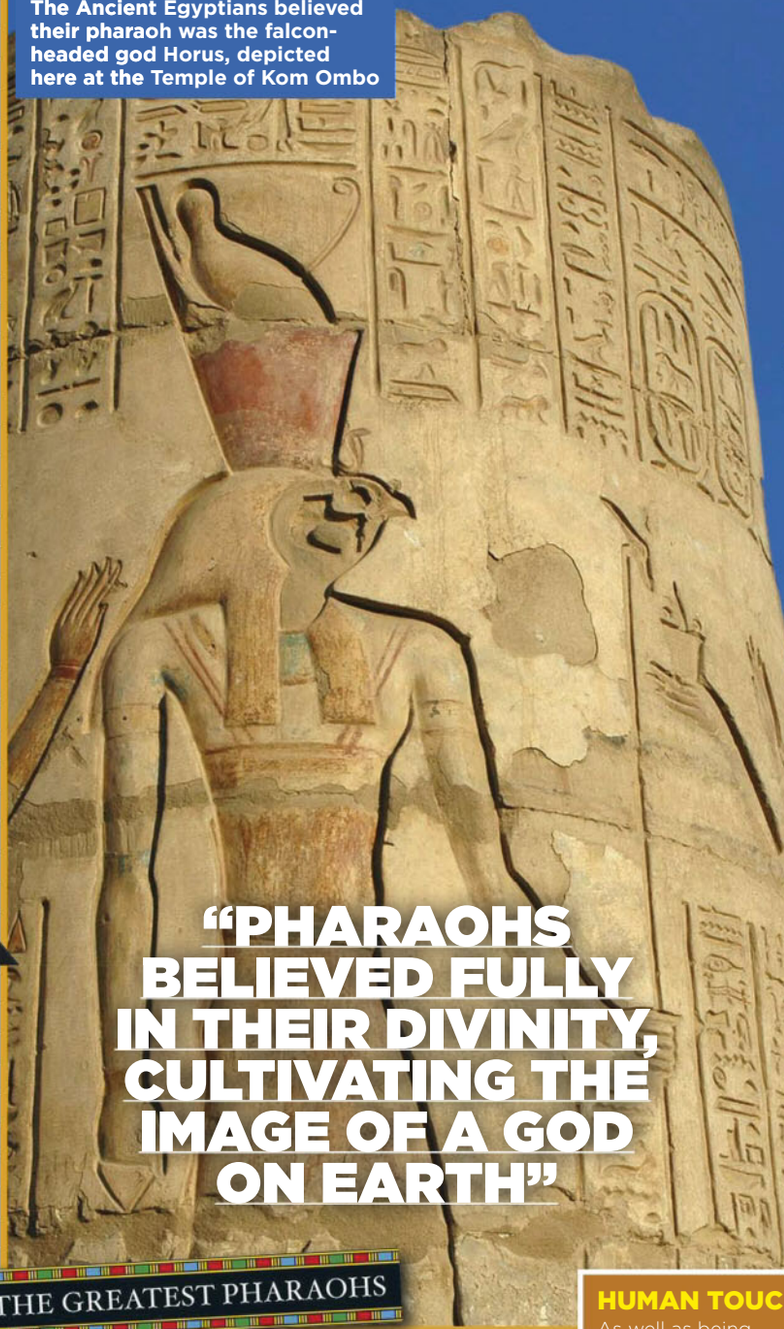
SHOW TIME

THE CORONATION OF A PHARAOH

One of the most important events in Ancient Egypt was the transfer of power and leadership to a new Pharaoh – an occasion that was celebrated with a host of ceremonies, feasts, festivals and rites that could last for an entire year.

Coronations were huge public events at which, it was believed, the gods themselves were in attendance: this, after all, was the moment a new pharaoh became a god on Earth.

The ritual performances honouring this transition of power included the presentation of the new ruler to his people, wearing (after their unification in c3100 BC) the white and red crowns of Upper and Lower Egypt. Later coronations became even more elaborate and included processions down the Nile and purification rites.



GOD OF THE SKY
The Ancient Egyptians believed their pharaoh was the falcon-headed god Horus, depicted here at the Temple of Kom Ombo

2

HALF-MAN, HALF-GOD

Pharaohs were much more than mere monarchs

To the Ancient Egyptians, their pharaoh was Horus, son of Ra, the Sun God. On his death, it was believed he would reunite with the Sun, and a new Horus would rule on Earth.

Pharaohs believed fully in their divinity, and set themselves apart from their subjects by cultivating the image of a god on Earth. They donned false beards and other royal insignia to develop this image: a striped royal headdress (known as Nemes), together with the Nekhbet vulture (symbolising Upper Egypt) and the *uraeus*, or cobra (representing Lower Egypt). Other visible symbols of a pharaoh's power and influence included a shepherd's crook, which reminded subjects they are led and protected by their leader, and the flail – used to beat grain, this served as a reminder that the pharaoh was a provider of food.

Egyptian kingship itself was based on divine right and the monarch was deemed an untouchable entity to ordinary people – during the period of the New Kingdom, subjects were expected to prostrate themselves seven times both on their bellies and backs before approaching their leader.

On becoming king, it was accepted that a pharaoh would assume a number of roles within his kingdom – from protecting Egypt from foreign invasions, expanding its territories and heading law and administration, to ensuring the gods were kept satisfied through offerings, ceremonies and monuments to honour them.

As absolute monarch, a pharaoh's word was law but, if order and justice in the land (known as *Ma'at*) was deemed to fail, or if a pharaoh failed to perform his religious and secular duties, he was held wholly responsible and suffered the consequences.

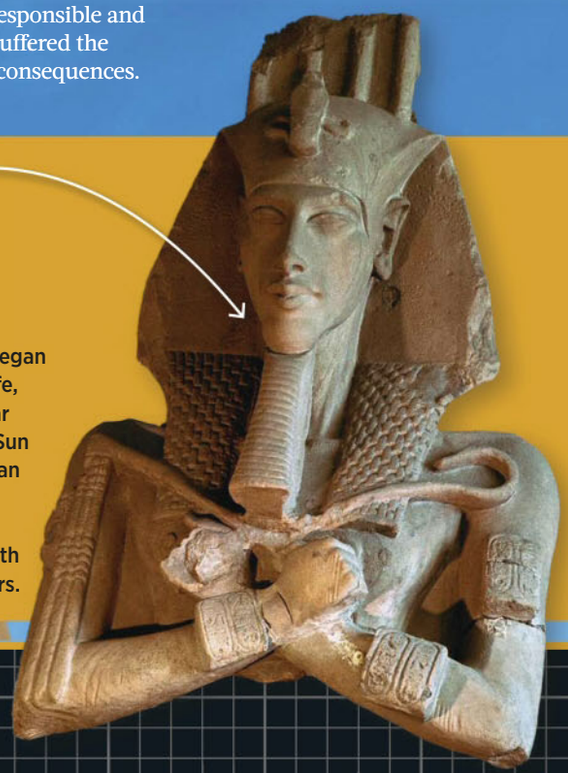
"PHARAOHS BELIEVED FULLY IN THEIR DIVINITY, CULTIVATING THE IMAGE OF A GOD ON EARTH"

#2: THE CULTURAL REFORMER

AKHENATEN

(Reigned c1353-36 BC)

HUMAN TOUCH
As well as being depicted with his realistic long jawline, Akhenaten had himself portrayed with broad hips and a **rounded stomach**.



Crowned as Amenhotep IV, Akhenaten is one of Egypt's most famous pharaohs. On his accession, Akhenaten inherited a peaceful and prosperous kingdom and immediately began a series of temple constructions and decoration projects, supported by his principle wife, Nefertiti, who held great power during her husband's reign. But, in the fifth or sixth year of his reign, the then Amenhotep IV changed his name to Akhenaten, in honour of the Sun God Aten. In the ninth year of his reign, Akhenaten declared Aten to be the only god – an extraordinary step in a culture that worshipped more than 2,000 gods.

Akhenaten is also remembered for his artistic reforms. Breaking with convention, Akhenaten chose to have himself depicted in a more natural, human style (complete with elongated jawline) rather than the physically perfect, godlike images of his predecessors.

"A SINGLE TEMPLE COULD PROVIDE EMPLOYMENT FOR THOUSANDS OF PEOPLE"

MOVING ON UP
In the 1960s, these temples were **taken apart, moved some 60 metres** and rebuilt. The move was made to protect the monument from the **rising waters of the Nile**, after the construction of the Aswan High Dam.



ORNATE OBELISKS
Intricate columns support the ceiling in the Temple of Horus at Edfu

3

PLACES OF WORSHIP

The sacred centre of Egyptian life: the temple

The temples of Ancient Egypt were the country's primary religious focus, built to commemorate specific gods or the Pharaoh himself. But they were not places of communal worship: it was the pharaoh and his priestly delegates who performed the rituals and offerings necessary to placate the gods and maintain *Ma'at* (the order and justice of the land). As High Priest, this duty fell to the Pharaoh, but out of necessity was delegated to priests.

Architecturally, as houses of the gods and metaphors for the Universe and creation, temples were built to impress. Courtyards, ceilings of painted stars and halls of columns shaped like papyrus and lotus flowers led to the most sacred part of the temple: the sanctuary, which typically contained a statue of the temple's god or pharaoh. These rooms initially began as small shrines but, over time, the rooms surrounding the sanctuary grew into the magnificent stone edifices built during the New Kingdom period (c1550–1070 BC) and beyond.

As well as their religious role, temples were also crucial to the economy. With granary buildings, storerooms, slaughterhouses and an agricultural support system – needed to grow, process and store the many offerings made every day – a single temple could provide employment for thousands of people. As both a major employer and religious site, temples were a key part of any settlement.

6
The number of parts to any Egyptian temple built during the New Kingdom period – including a sacred lake

Although the importance of the temple in Egyptian life remained high throughout the era, additions and changes were made at various points. By the beginning of the New Kingdom, oracles could be found in many temples, who were on hand to channel and interpret divine messages. And by the Late Period (c664–332 BC), it was common to find laymen paying temple priests to kill, mummify, and bury an animal of a particular species as an offering to a god.



ALAMY X2, GETTY X5

ANCIENT EGYPT'S FINEST

THE GREATEST TEMPLES

Built to honour the gods and pharaohs, these four holy houses are extraordinary architectural delights...

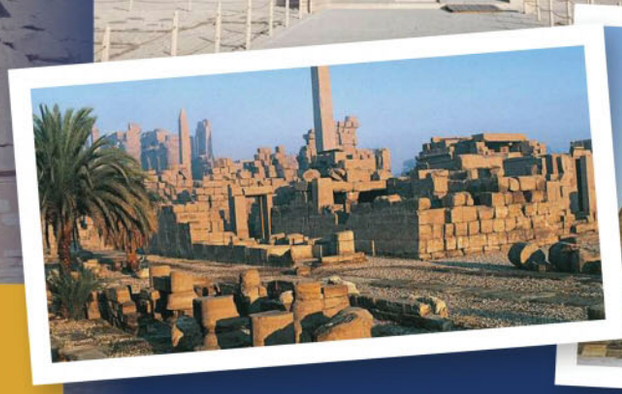
◀ ABU SIMBEL

The twin temples of Abu Simbel were carved out of the mountainside during the reign of Ramesses II (see below) as a tribute to himself and his first and favourite queen, Nefertari. It is thought to have taken 20 years to construct and its Great Temple stands 30m high and 35m long, with four 20m-high seated colossi of Ramesses on his throne, flanking the entrance.



◀ TEMPLE OF HATSHEPSUT

Built for one of Ancient Egypt's few female pharaohs, Hatshepsut (reigned c1479-58 BC), the temple is built into a cliff face, and consists of three layered terraces reaching 30m in height, connected by long ramps and once surrounded by gardens. Designed as a mortuary temple to honour Hatshepsut after her death, it was dedicated to the Sun God Amon-Ra.



▲ KARNAK

The largest ancient religious site on Earth, this city of temples – dedicated to the gods Amun, Mut and Khonsu – was built over some 2,000 years. Dating from c2055 BC – AD 100, the city covers around 200 acres. The great temple at its heart is so big that St Peter's, Milan, and Notre Dame Cathedrals would all fit within its walls.



▲ LUXOR TEMPLE

Luxor Temple was built c1400 BC and, like Karnak (left), is dedicated to three Egyptian gods: Amun, Mut and their child Khonsu. The temple was the focus of one of Ancient Egypt's most important events – the annual Opet Festival, during which statues of the three gods were brought to the temple by procession from nearby Karnak.

THE GREATEST PHARAOHS

#3: THE ARCHITECT

RAMESSES II

(Reigned c1279-13 BC)

The third pharaoh of the 19th Dynasty, Ramesses II is often regarded as one of Egypt's greatest pharaohs. Thought to have built more temples than any other Egyptian king, Ramesses II is also believed to have fathered more than 166 children by at least 100 wives, and reigned for some 67 years.

Much of the first part of Ramesses' reign was focused on construction. He built cities, temples and monuments, and founded a new capital – Per Ramessu – at what is today modern Qantir. But, as well as embarking on new building projects, Ramesses also sought to transform existing monuments so that they, too, would reflect his power and influence. The images and words of previous pharaohs were replaced by his own, and his cartouches (a type of symbol containing a royal name) can still be seen in buildings across Egypt – even those he did not build.

Ramesses' monuments spread from Memphis and Heliopolis to Abydos and Thebes, including his magnificent mortuary temple of Ramesseum, the ruins of which can still be seen in Thebes.



AGE OF CONSTRUCTION

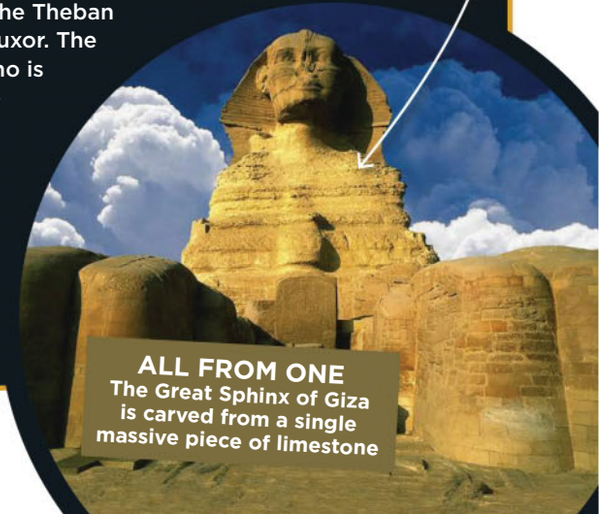
THE MONUMENT MAKERS

The Ancient Egyptians didn't only honour their pharaohs and gods with great temples, but with other impressive structures as well. The Great Sphinx of Giza, for instance, is said to have been erected by Pharaoh Khafre (reigned c2600-2551 BC).

Other monuments include huge statues such as the two Colossi of Memnon, which still stand in the Theban necropolis, west of the modern city of Luxor. The statues show Pharaoh Amenhotep III, who is depicted seated and gazing towards the rising Sun. The colossal effigies are 18 metres tall and are thought to weigh 700 tons each.

Wood was in short supply, so sun-baked mud brick and stone were the main materials used in construction. Bricks used for specific state projects were often stamped with the name of the king that the building honoured.

GARGANTUAN GIZA
With its lion body and **pharaonic head**, the Great Sphinx stands at **20 metres high and 73 metres** long.



ALL FROM ONE
The Great Sphinx of Giza is carved from a single massive piece of limestone

4

THE POLITICIAN

The kings were responsible for law, war and everything in between

The Pharaoh had complete political power over Ancient Egypt; his commands would become law across the land. To assist him in the running of the realm, the monarch had a hierarchy of advisors, officials, priests and administrators, to whom affairs of state were delegated. Officers known as viziers were the highest-ranking officials under the Pharaoh – they supervised the running of the country and held a great deal of power. It was the role of the Vizier to rule on all petitions and grievances brought before the court.

170
The number of pharaohs who ruled Ancient Egypt – at least

While the power of the Pharaoh was deemed indisputable, most rulers still believed it prudent to woo the social groups that could help them achieve their political aims: the military high command, the priesthood and the scribal elite.

Surrounded by deserts, Egypt was not easy to invade but, on occasion, a pharaoh would need to rally his troops and fend off foreign invasion, including from the Libyans to the west and the Nubians to the south. We know that pharaohs of the New Kingdom period (c1550–1070 BC) fought from horse-drawn chariots and were occasionally forced to hire mercenary fighters – sometimes from their enemies – to boost their troops. Standing armies can be seen from the 12th Dynasty (c1976–1794 BC), used for both defence and invasion.

Some pharaohs were more keen than others to lead foreign campaigns and become involved in military matters. Senusret III (reigned c1872–1853 BC) in particular, led a series of campaigns in Nubia and often took to the field of battle himself. He also built forts on the borders of Egyptian conquests.

Another great military pharaoh was Thutmose III, known as the Napoleon of Ancient Egypt. An accomplished administrator and statesman, Thutmose III was also a brilliant general – a desirable ability in a pharaoh – who never lost a battle. He conducted campaigns in Palestine, Syria and Nubia, bringing untold wealth into Egypt – not to mention the annual tributes from conquered cities.

In matters of law, pharaohs were expected to ensure that *Ma'at* (see What was *Ma'at*?, right) was maintained at all times, and were regarded as supreme judge and lawmaker. Once again, viziers and other high-ranking officials sat as judges, reporting important cases back to the Pharaoh, who would then make a final decision and cast judgment.

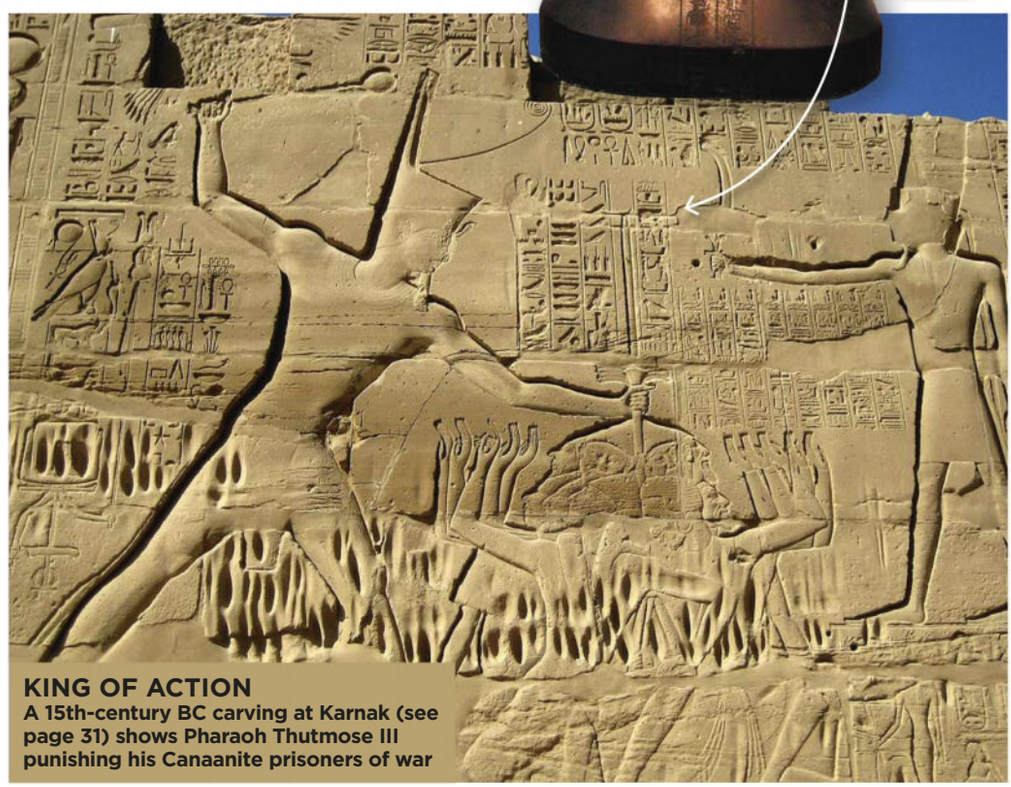
Although no formal Egyptian code of law remains, several pharaohs are remembered as law-givers, including Bocchoris (reigned 722–715 BC). He seems to have been a keen promoter of individual rights, who suppressed imprisonment for debt, and reformed laws relating to the transfer of property.

"THE PHARAOH WOULD MAKE THE FINAL DECISION, AND CAST JUDGMENT"



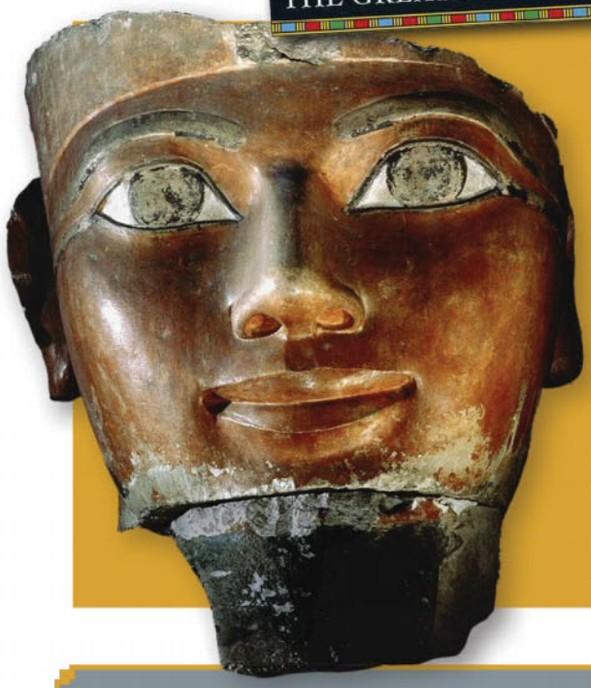
PHARAOH'S RIGHT HAND
The sarcophagus of Sasobek, Vizier to Psamtek I (reigned 664-10 BC)

PHARAONIC CONQUESTS
This carving, known as the seventh pylon, lists **119 Palestinian towns that were conquered** during Thutmose III's first campaigns.



KING OF ACTION
A 15th-century BC carving at Karnak (see page 31) shows Pharaoh Thutmose III punishing his Canaanite prisoners of war

ART ARCHIVE X1, ALAMY X1, GETTY X3, ISTOCK X1



#4: THE POLITICIAN

HATSHEPSUT

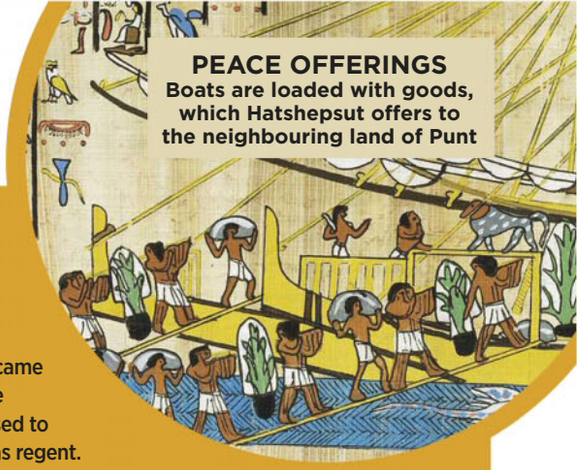
(Reigned c1492-58 BC)

Wife to her half-brother, Thutmose II, Hatshepsut became queen when her sibling-husband inherited the throne in c1492 BC. When he died c1479 BC, the throne passed to Hatshepsut's infant step-son, Thutmose III, with her as regent.

Within seven years of her regency, Hatshepsut had been crowned king and was reigning jointly with her step-son. Formal portraits of her had also changed significantly, moving from the typical feminine portrayal to a more masculine one, complete with traditional kingly regalia of kilt, crown or head-cloth and even false beard.

Key to her success was a group of loyal officials who controlled key positions in government, helping to promote the image of Hatshepsut as a traditional Egyptian king. Her reign was mostly peaceful, with foreign trade taking precedence over war.

After her death in 1458 BC, in a bid to ensure his line would be remembered without female interruption, Thutmose III set about eradicating all traces of his step-mother's rule, destroying statues, defacing monuments and removing her name from the official king list.



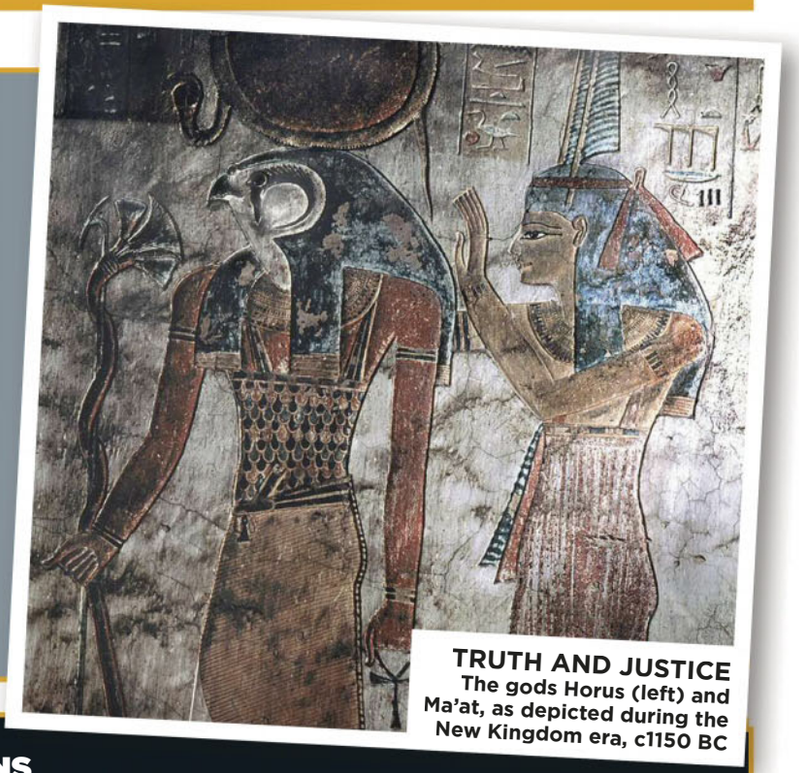
PEACE OFFERINGS
Boats are loaded with goods, which Hatshepsut offers to the neighbouring land of Punt

BALANCING ACT

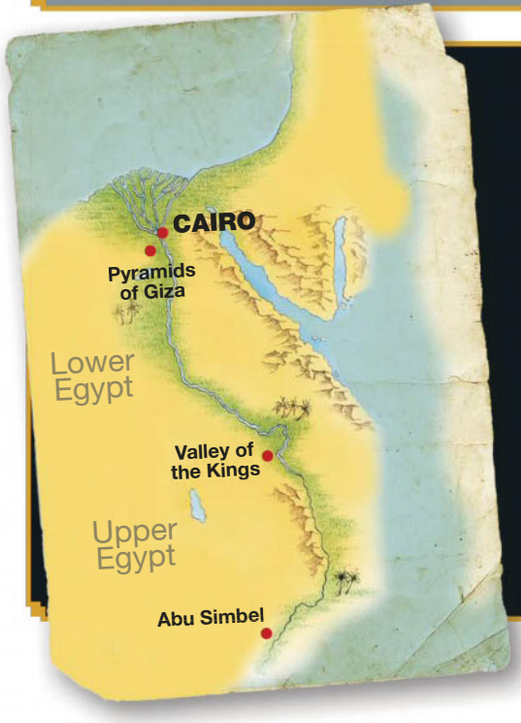
WHAT WAS *MA'AT*?

Goddess of truth, justice and harmony, Ma'at – usually depicted as a woman with an ostrich feather on her head – was associated with the balance of life. She resided in the underworld, sitting in judgment over the souls of the dead and preventing the Universe from descending into chaos. The goddess also gave rise (and a name) to an incredibly important concept in Ancient Egypt. *Ma'at* encompasses truth, order, balance, law, morality and justice.

Ancient Egyptians were expected to follow the moral principles of *Ma'at*, acting with honour and truth, while a pharaoh's chief role was to maintain *Ma'at* – universal harmony – in his kingdom, and interpret the goddess's will correctly. In matters of war, for example, a pharaoh had a duty to protect his borders, but also to attack neighbouring lands if he deemed it necessary for maintaining harmony in the land.



TRUTH AND JUSTICE
The gods Horus (left) and Ma'at, as depicted during the New Kingdom era, c1150 BC



UNITED NATIONS

LOWER AND UPPER EGYPT

The somewhat confusing terms of Lower (north) and Upper (south) Egypt took their lead from the direction of the Nile, which flows from the higher lands of the south, to the lower lands of the north. Lower Egypt stretched from just south of modern-day Cairo to the Nile Delta at Alexandria, while Upper Egypt extended from the Libyan Desert south past Abu Simbel.

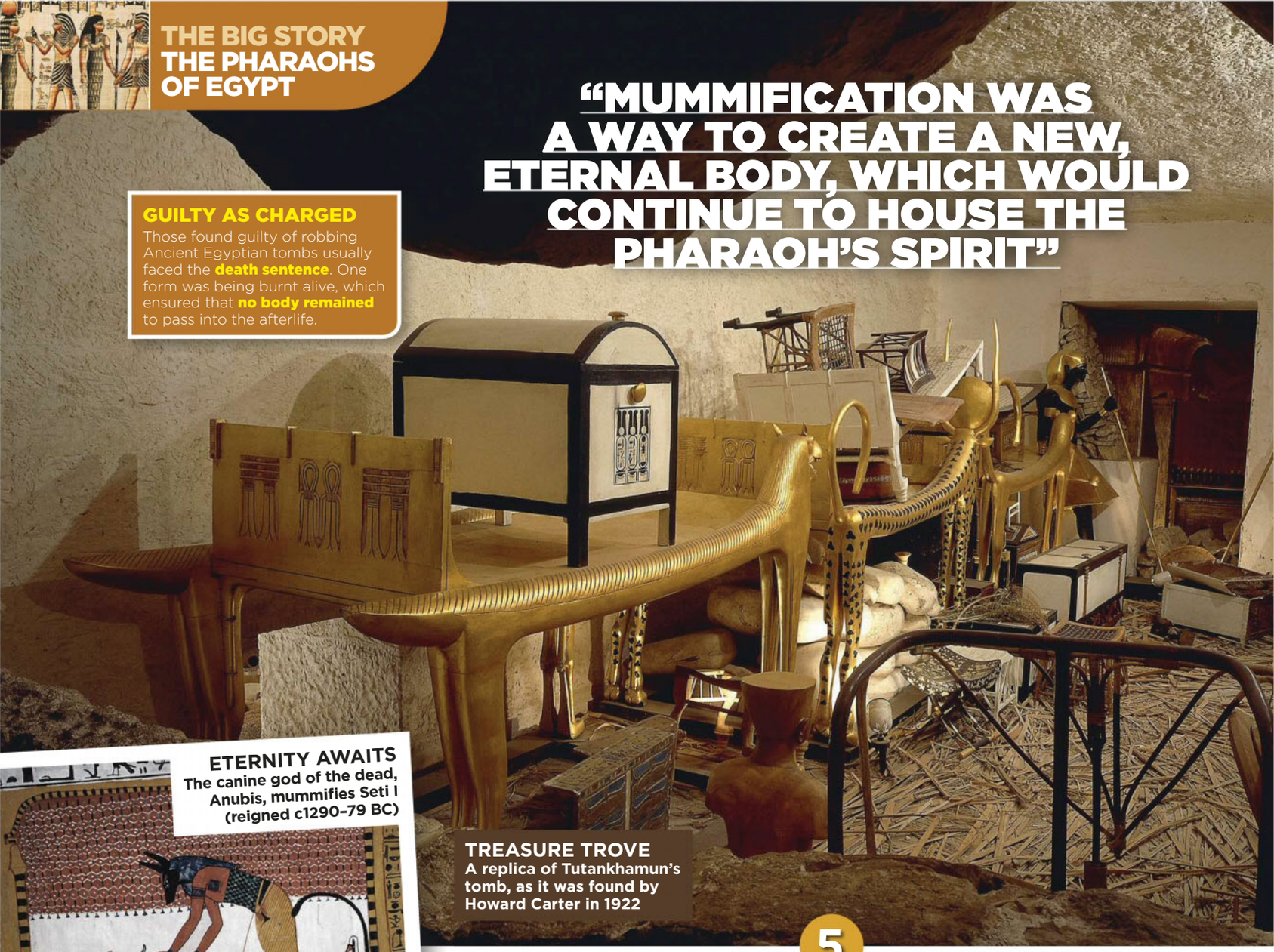
In early Ancient Egypt, the two kingdoms were ruled by different rulers, each with their own regalia: the white crown of Upper Egypt (the Hedjet) and the red crown of Lower Egypt (the Deshret). But, in c3100 BC, the two lands were united by the King of Upper Egypt, Pharaoh Narmer (also known as Menes) after his army defeated that of his rival, starting the first of what would be 30 Egyptian dynasties, spanning nearly 3,000 years. The red and white crowns were joined to create the double crown (Pshent) of the newly unified Egypt.

For the Ancient Egyptians, the unification marked the beginning of their civilisation.

CREDIT INFORMATION HERE

"MUMMIFICATION WAS A WAY TO CREATE A NEW, ETERNAL BODY, WHICH WOULD CONTINUE TO HOUSE THE PHARAOH'S SPIRIT"

GUILTY AS CHARGED
Those found guilty of robbing Ancient Egyptian tombs usually faced the **death sentence**. One form was being burnt alive, which ensured that **no body remained** to pass into the afterlife.



TREASURE TROVE
A replica of Tutankhamun's tomb, as it was found by Howard Carter in 1922

ETERNITY AWAITS
The canine god of the dead, Anubis, mummifies Seti I (reigned c1290–79 BC)

5

INTO THE AFTERLIFE

A pharaoh's tomb was his most vital creation

One of the first structures a new pharaoh began work on was that of his own tomb, to ensure that it would be complete by the time of his death. Tomb designs themselves grew increasingly elaborate over time – expanding from the simple mud-brick mastaba tombs of early Egypt, to the Great Pyramids of Giza, where you'll find one of the Seven Wonders of the Ancient World.

Pharaohs were revered as gods and, as such, their tombs were built to last forever, ensuring the continuation of the King's legacy and prosperity in the afterlife. The now-famous pyramid tombs were some of the most astonishing structures of the Fourth Dynasty (c2600–2450 BC), particularly the Pyramid of Khufu, which is thought to weigh some 5.75 million tons, has a base that spans 52,815 square metres and sides that measure more than two football fields each.

The first tomb decorations can be seen during the Old Kingdom era (c2686–2181 BC). These take the form of hieroglyphic writings – known as Pyramid Texts – which give detailed guidelines and instructions for safe passage into the afterlife.

Inside these tombs, elaborate preparations were made for the afterlife. They were stocked with all the material goods a ruler might need after death: furniture, clothes (including underwear), food and drink for royal feasting in the afterlife – even favourite pets.

Tombs moved underground during the New Kingdom (c1550–1070 BC), in a bid to conceal them from would-be grave robbers. During this period, we also see coloured tomb-wall drawings emerge, depicting the pharaoh's passage through the afterlife.

30
The length, in metres, of some versions of the Book of the Dead (see right for details)

Mummification of a pharaoh's corpse was seen as a way to create a new, eternal body, which would continue to house his *ka* and *ba* – his spirit. Embalming was essential, as it ensured the body was recognisable and to help *ka* and *ba* return to it.

The complicated physical and spiritual process of mummification took around 70 days. Usually, most of the internal organs were removed and placed in containers known as canopic jars – often, the heart was left in the body while the brain was discarded. It was common for limestone funerary servants to be added to the inside of the coffin to serve the Pharaoh in the afterlife, and amulets and other precious items were wrapped within the mummy's linen bandages.

ALAMY X1, AKG X1, GETTY X4



UNDER WRAPS
Carter peels back the cloth protecting Tutankhamun's second gold sarcophagus

I WOZ 'ERE!
In 1842, a 'H Stewpot' left his mark in a tomb in modern-day El Kab

THE GREATEST PHARAOHS

#5: THE BEST TOMB

TUTANKHAMUN

(Reigned c1333–23 BC)

One of the most important Egyptian tombs to have been discovered was that of the so-called boy-king, Tutankhamun, in 1922. The discovery was made by archaeologist Howard Carter, who had long been convinced that Tutankhamun's tomb lay undiscovered somewhere in the Valley of the Kings. The search took seven years but, eventually, the entrance was located beneath the remains of workmen's huts, which had been built during the Ramesside period, c1292-1069 BC.

What Carter found in that tomb was extraordinary. The corridor was in a state of disarray, littered with artefacts and rubble probably left by robbers, but the antechamber beyond it still held priceless objects, including chariot pieces. Deeper still into the tomb, Carter also uncovered a treasure-filled annexe.

The most exciting room, however, was the burial chamber itself. Four golden shrines, each smaller than the last, enclosed the sarcophagus of Tutankhamun himself. His mummy was covered with three gold coffins and his head protected by a gold mask. A treasure chamber nearby held the Canopic Shrine, which contained the Pharaoh's organs – liver, lungs, stomach and intestines – which were thought to have been needed in the afterlife.

DEATH IS ONLY THE BEGINNING

THE BOOK OF THE DEAD

The Book of the Dead was a collection of spells and illustrations believed to help the deceased reach the afterlife. These were written on a papyrus roll and placed in the tomb along with other items the deceased might need in the great beyond.

The Ancient Egyptians believed the book's spells gave the departed all the knowledge and power needed to navigate the netherworld, so that they could achieve the ultimate goal: eternal life. The book details the landscape they might encounter, the gods and monsters they might meet, as well as the final judgment, which involved weighing a person's heart to decide if they could enter the afterlife.

Some spells allowed a dead person to turn into different animals to ease their journey; others provided information for specific points of the journey. Without the correct spells, the deceased could be punished or die a 'second death' which would prevent them ever reaching the afterlife.

DAY OF JUDGMENT
The god Osiris weighs the hearts of the dead to judge their worth



RISKING THE CURSE

TOMB RAIDERS

The Valley of the Kings in Egypt's Theban Hills is the site where, for nearly 500 years, between the 16th and 11th centuries BC, Egypt's pharaohs were laid to rest. Some 63 tombs have been discovered there down the centuries.

The tomb of Ramesses VII is thought to have been the first tomb uncovered. Although not fully investigated until 1984-85, 132 pieces of Ancient Greek and Roman graffiti identified inside the tomb revealed it had been open for many centuries. Other tombs in the region also show evidence of ancient visitors, including those of Ramesses IV and Ramesses II.

Not all of the visits to the tombs have been welcome ones. It is thought that most of the tombs in the Valley of the Kings were robbed within 100 years of their sealing, despite the warnings and curses left in the tombs to deter any would-be thief. Tutankhamun's tomb itself is believed to have been robbed at least twice before its discovery in 1922. Luckily for archaeologists, records of the items left in the tombs were often made, providing a handy inventory and making it easier to regain any lost treasures.

And it would seem that the Valley of the Kings still has secrets to yield. Recent scans of Tutankhamun's burial chamber have revealed hidden doorways that may lead to the final resting place of Queen Nefertiti, wife of the boy-king's father, Pharaoh Akhenaten. If the theories turn out to be true, the find would be the most important archaeological discovery of the 21st century.

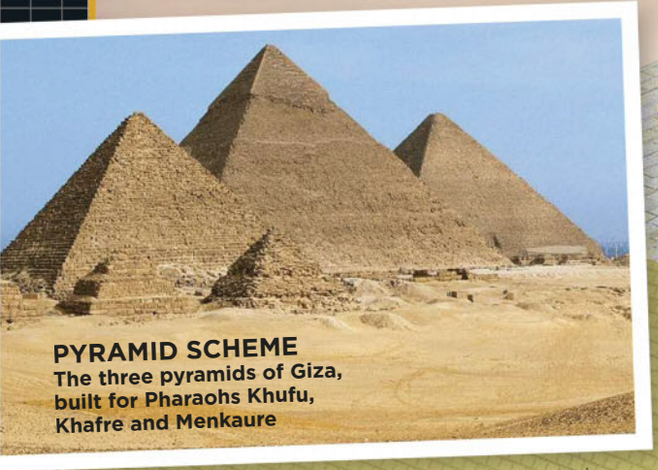
TURN OVER TO LOOK INSIDE THE GREAT PYRAMID OF GIZA

5

THE GREAT PYRAMID OF GIZA

One of Ancient Egypt's most famous structures

Built between c2580 and 2560 BC, the Great Pyramid of Giza (also known as the Pyramid of Khufu, after the pharaoh for whom it was built) is the oldest and largest of the three pyramids of the Giza complex and one of the Seven Wonders of the Ancient World.



PYRAMID SCHEME
The three pyramids of Giza, built for Pharaohs Khufu, Khafre and Menkaure

TO THE POINT
The top of the pyramid, the capstone, was the most important part of the structure and was often made of gold. The Great Pyramid's point is missing – it may have been unfinished or looted.

EXCITING DISCOVERY
In 2011, a robot probe explored parts of the pyramid unseen for some 4,500 years. One of its key finds was of hieroglyphic symbols in red paint, found in a tiny, secret chamber at the end of a narrow tunnel.

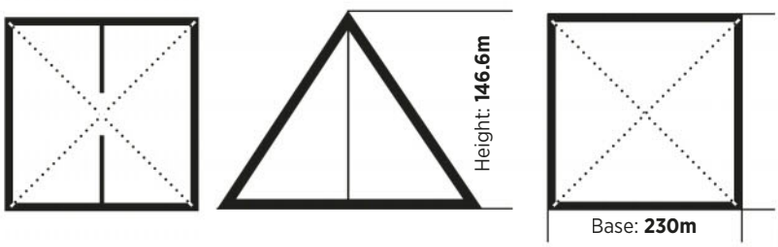
QUEEN'S CHAMBER
Despite its name, it was unlikely that any queen was buried in this room. It probably housed a life-size effigy of the Pharaoh – his Ka statue. The now-empty chamber measures 5.7m by 5.2m and is 4.5m high.

UNDERGROUND CHAMBER
This unfinished and empty rock-cut chamber may have been built to deter vandals. The entrance is too small for a sarcophagus to be carried through.

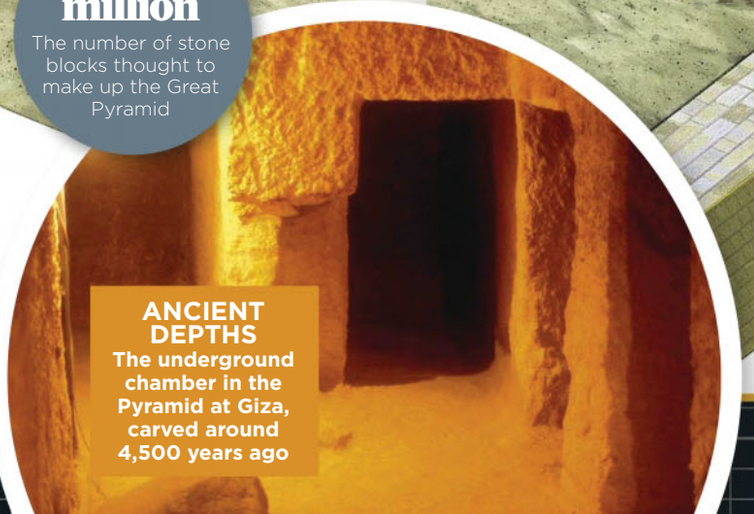
ORIENTATION
The four sides correspond precisely to the compass points

N

DIMENSIONS
At nearly 147m high, the pyramid is taller than the London Eye (135m)

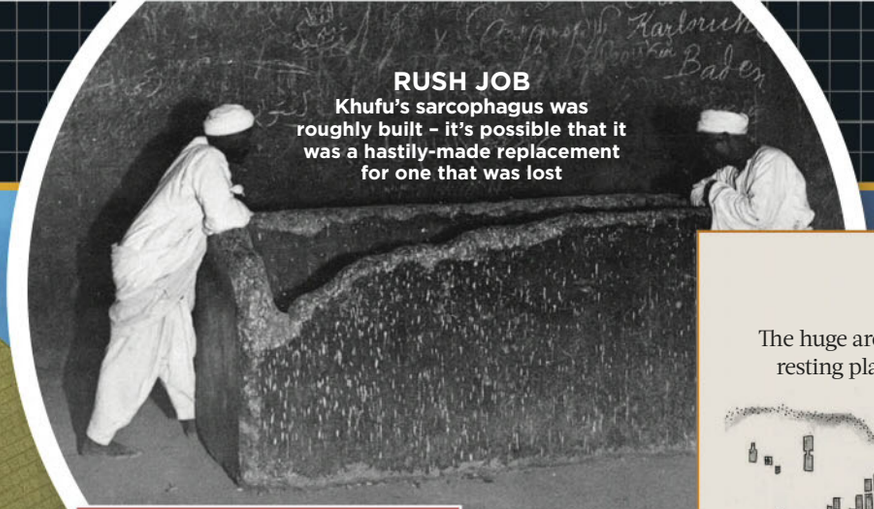


2.3 million
The number of stone blocks thought to make up the Great Pyramid



ANCIENT DEPTHS
The underground chamber in the Pyramid at Giza, carved around 4,500 years ago

ILLUSTRATION: SOL 90, ALAMY X1, GETTY X2



RUSH JOB
Khufu's sarcophagus was roughly built – it's possible that it was a hastily-made replacement for one that was lost

THE KING'S CHAMBER
Built entirely of rose granite, this room contains Khufu's 3.75-ton granite sarcophagus, now missing its lid and with a broken corner. The chamber's flat roof – composed of nine granite blocks – supports over 400 tons of masonry, helped by five relieving chambers.

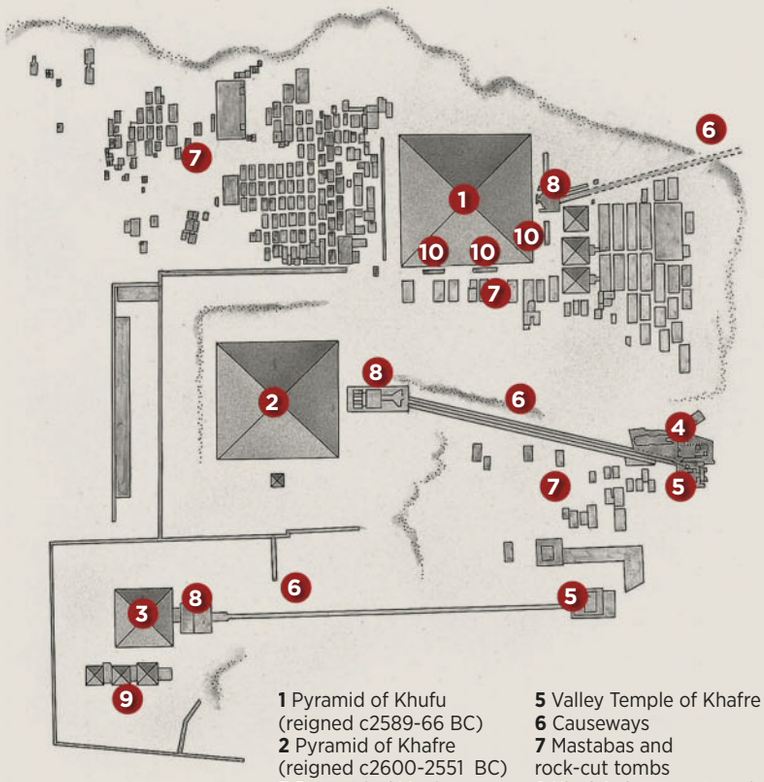
GRAND GALLERY
This gallery connects the upward passage with the tombs of the King. It is 46m long and 8.5m high.

ENTRANCE
Today, visitors enter through the 'Robbers' Tunnel', which it is thought was created with a battering ram in the ninth-century AD by the Abassid Caliph Al-Ma'mūn. The original entrance was hidden.

HIDDEN SHIPS
A number of boat pits around the pyramid contained vessels for use by the Pharaoh in the afterlife. A reconstruction of one – the Khufu ship – is on show at the Giza Solar boat museum, next to the pyramid.

THE GIZA NECROPOLIS: CITY OF THE DEAD

The huge archaeological site, located on the outskirts of Cairo, is the final resting place for some of Ancient Egypt's most well-known pharaohs



1 Pyramid of Khufu (reigned c2589-66 BC)
2 Pyramid of Khafre (reigned c2600-2551 BC)
3 Pyramid of Menkaure (reigned c2530-12 BC)
4 Temple of the Sphinx and the Great Sphinx itself
5 Valley Temple of Khafre
6 Causeways
7 Mastabas and rock-cut tombs
8 Khufu's funerary temple
9 Pyramids of Queens
10 Boat pits

FUNERARY TEMPLES THROUGH THE AGES

The tombs of Egypt's great and powerful didn't always looked the same...

MASTABA TOMBS
The first tombs of Egyptian aristocrats were underground funerary chambers. A chapel with a single hall used for ritual offerings was built on top of them.

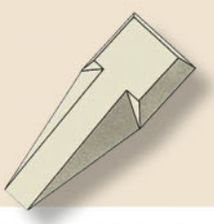
PYRAMIDS
These began by superimposing several floors on top of existing mastabas. The 'Bent' Pyramid at Dashur is one of the oldest, and highlights the problems encountered by the first pyramid builders.

HYPOGEUM
As the plundering of pyramids became more and more common, hypogeum tombs hid both the funerary chamber and chapel underground.

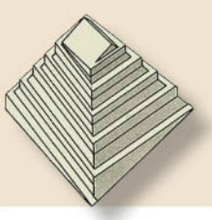
THE MYSTERY OF THE RAMPS

Recent research has confirmed that the Ancient Egyptian builders used a variety of ramp systems to construct the mountainous tombs

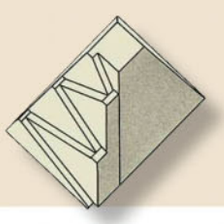
1 Single frontal ramp



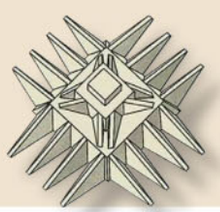
2 Perimeter ramp



3 Layered ramp



4 Multiple ramps



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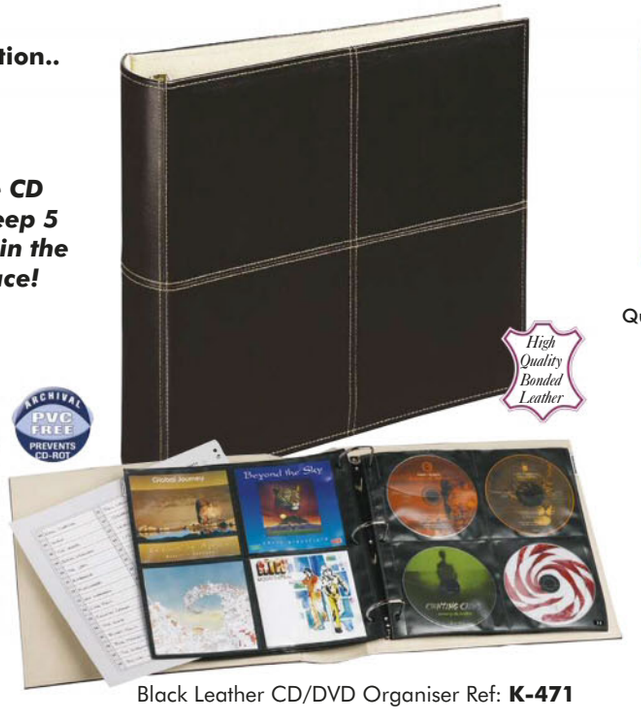
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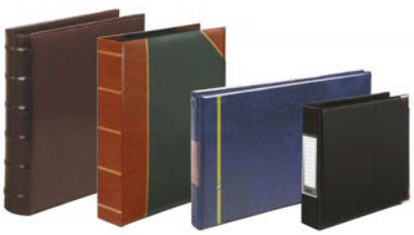
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THE AFRICAN QUEEN
Intelligent, shrewd and charming, Cleopatra VII was a force to be reckoned with

CLEOPATRA AND ROME

ALAMY X1, GETTY X3, REX X1, ISTOCK X3

Meet history's ultimate femme fatale, whose desperate bid for power involved love affairs, murders and war...



THE LAST PHARAOH CLEOPATRA AND ROME

She was a daughter of Egypt – part of the Macedonian-Greek Ptolemaic Dynasty that had ruled since the death of Alexander the Great in 323 BC. Queen of Egypt, Cyrene and Cyprus, she was renowned for her passionate nature, beauty, intellect and determination to advance the interests of the Ptolemaic legacy.

They were masters of Rome – powerful, ruthless military generals who had expanded the might of the Roman Empire, seizing power for themselves and seeking to add the vast Egyptian Empire to Rome's ever-expanding list of imperial conquests.

The relationships between Cleopatra VII, Julius Caesar and Mark Antony were love affairs, and power struggles, that would change the course of Egyptian and Roman history, forever.

EGYPT AND ROME

First century BC. Rome, the latest superpower, was rapidly extending a foothold across the known world under three formidable generals: Julius Caesar, Gnaeus Pompeious Magnus (Pompey), and Marcus Licinius. A definite threat to Egypt, Rome's supreme wealth and influence also made it a source of attraction and necessary financial support.

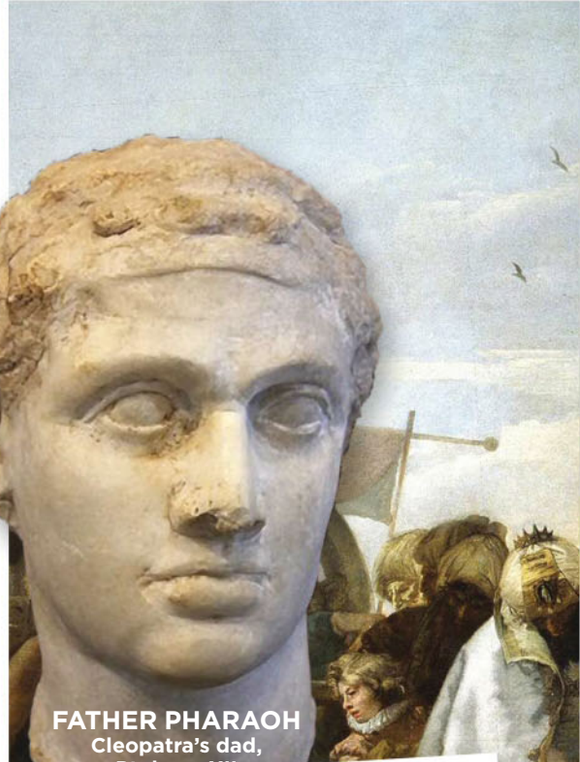
It was Cleopatra's father, Ptolemy XII, who had effectively opened the door to the Romans.

23
The number of times Julius Caesar is said to have been stabbed, during his murder in 44 BC

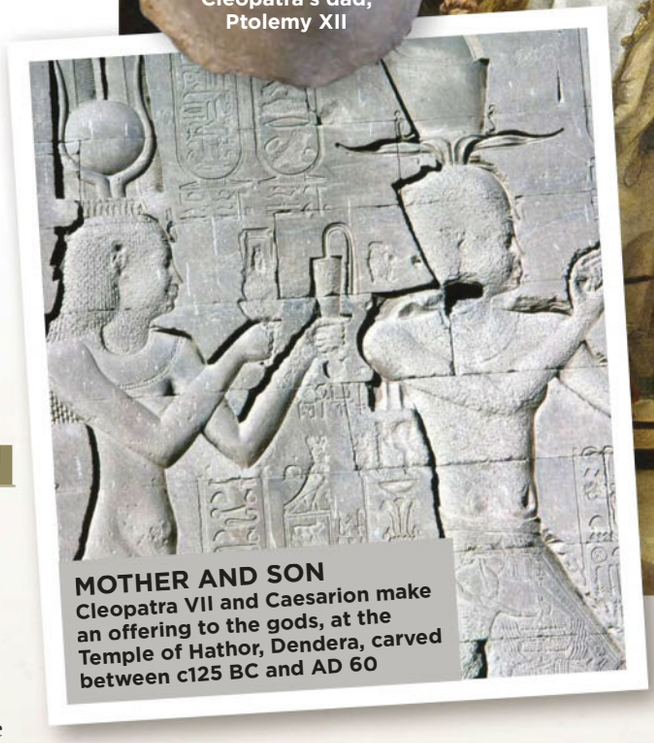
Although Ptolemy was eventually restored to the throne, again with the help of the Roman Senate, the damage had been done. Egypt was weak, and Rome had its sights firmly set on conquest. To further compound matters, Ptolemy XII made the Roman Senate executor of his will (which proclaimed his eldest surviving daughter, Cleopatra, and eldest son co-regents), and his extensive bribery had left the realm in financial straits: Rome's foothold in Egypt looked sure to extend.

In 51 BC, 18-year-old Cleopatra emerged onto the political scene as co-regent of Egypt with her younger brother and (in true Egyptian royal tradition) husband, ten-year-old Ptolemy XIII. Like her father before her, Cleopatra sought absolute power in Egypt, and soon set about dropping her brother's name from official documents. But, with Egypt facing economic failures, famine and crippling debt, Cleopatra realised she, too, needed the help of mighty Rome to lead Egypt back to peace and prosperity once more. Only this time, it would be on her terms.

Cleopatra was not the only one harbouring a desire for sole control of Egypt. In 48 BC, encouraged by his court advisors, Ptolemy XIII banished



FATHER PHARAOH
Cleopatra's dad, Ptolemy XII



MOTHER AND SON
Cleopatra VII and Caesarion make an offering to the gods, at the Temple of Hathor, Dendera, carved between c125 BC and AD 60

"THE BATTLE LINES HAD BEEN DRAWN, AND CLEOPATRA HATCHED A PLAN TO GAIN THE EAR OF CAESAR"

When Ptolemy XI was killed in 80 BC, his only male heirs were Ptolemy XII and his younger brother – the illegitimate sons of Ptolemy IX.

Ptolemy XII was crowned in 76 BC but, soon after, the question of his legitimacy was raised in Rome, where anti-Senate politicians claimed to be in possession of a will, written by Ptolemy XI, that bequeathed Egypt to the Romans. Fearing the loss of the throne and an end to his dynasty, Ptolemy took a huge risk: he struck a deal with Rome.

Desperate to retain his kingship, Ptolemy asked Caesar and Pompey to recognise him as Egypt's legal ruler and a comrade and ally of Rome. This they did, for the price of 6,000 talents – an enormous amount, of which some was borrowed from Roman moneylenders. When Rome moved in on the Egyptian territory of Cyprus the following year, Ptolemy did nothing. The Egyptian people were outraged, and banished their Pharaoh, leaving his wife and eldest daughter to rule in his stead.

Cleopatra from Alexandria and proclaimed himself sole ruler. The battle lines had been drawn between the sibling-spouses and Cleopatra, alone and powerless, hatched a plan to gain the ear of Caesar, who was merrily celebrating victory over his one-time comrade Pompey, at the Battle of Pharsalus.

As luck would have it, Caesar and his troops were already in Alexandria (he was in pursuit of his adversary Pompey who, having been defeated, was hoping for assistance from Ptolemy XIII). All Cleopatra had to do was enter Alexandria unseen and talk to Caesar before he reached his own agreement with her brother. It was an idea easier said than done.

SEDUCTION TACTICS

Fully prepared to seduce Caesar in order to enlist his help, Cleopatra planned to smuggle herself into Alexandria and inside the royal palace, where Caesar was staying as her brother's honoured guest. Greek historian Plutarch, writing more than a century later, described how Cleopatra achieved her mission:

"*[Cleopatra] embarked in a little skiff and landed at the palace when it was already getting dark; and as it was impossible to escape notice otherwise, she stretched herself at full length inside a bed-sack, while Apollodorus [her servant] tied the bed-sack up with a cord and carried it indoors to Caesar.*"

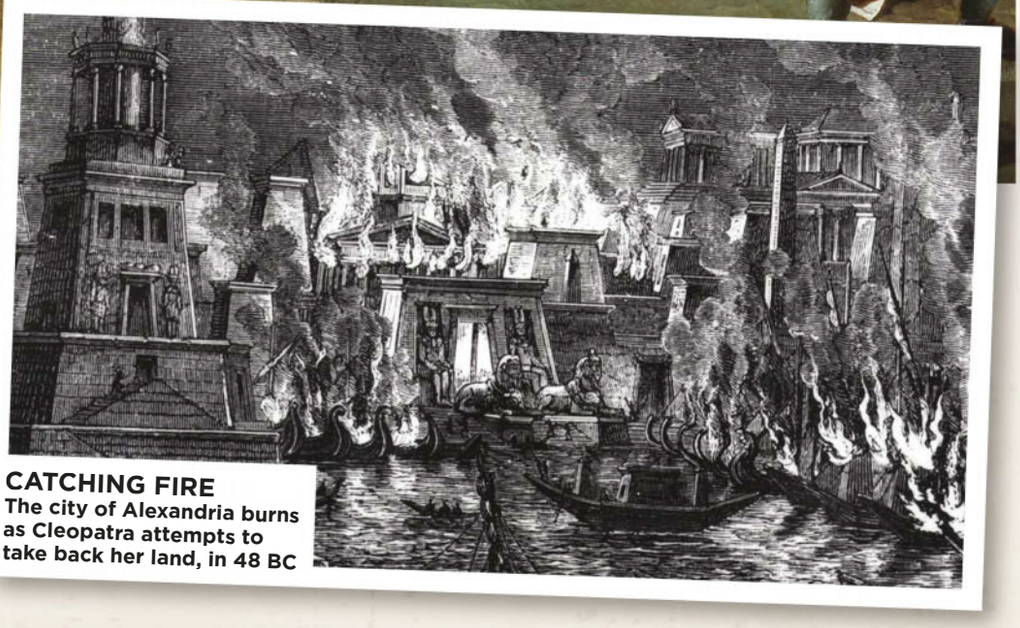
Caesar – a man some 30 years her senior – seems to have been instantly captivated by the Egyptian Queen and, after "succumbing to the charm of further intercourse with her, he reconciled her to her brother on the basis of a joint share with him in the royal power". Cleopatra finally had the military support she needed to rule Egypt.

Her brother-husband was livid. On finding his banished sister and Caesar together at the palace, having clearly spent the night together,

ALAMY X2, ART ARCHIVE X1, GETTY X5

SPLIT IMAGE
While the West inherited Rome's idea of a **cunning, seductive Cleopatra**, the Eastern scholars who wrote of her painted **a queen of great intellect** – a scholar, philosopher and scientist.

CHARM OFFENSIVE
Julius Caesar meets Cleopatra in this 18th-century painting



CATCHING FIRE
The city of Alexandria burns as Cleopatra attempts to take back her land, in 48 BC

he reputedly flung his diadem to the ground and stormed out of the room, declaring his sister a traitor to Egypt.

Chaos followed. Ptolemy besieged the palace in which Caesar was staying, and Cleopatra's younger sister, Arsinoe, also joined in the fight. She declared herself to be the true queen of Egypt and led rebel forces against her siblings. All must have seemed lost for Cleopatra and her Roman lover but, with the arrival of Caesar's troops from Syria, the tide turned once more. Ptolemy and Arsinoe were both defeated.

Cleopatra's seat as Egyptian ruler now seemed secure – she was even pregnant with Caesar's child. But, instead, of declaring Cleopatra sole ruler of Egypt, the Roman general instead made her co-ruler with her remaining brother, and soon-to-be husband, 12-year-old Ptolemy XIV.

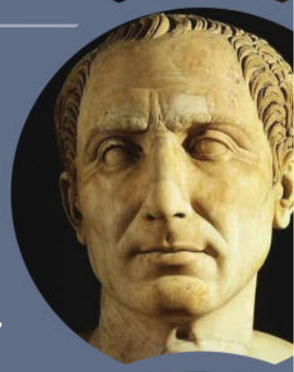
KEY PLAYERS

The men and women of Egypt's downfall



CLEOPATRA VII
(c69-30 BC)

Cleopatra was the last queen of Egypt's Macedonian Dynasty (323-30 BC). She ruled Egypt successively with her two brothers and then her eldest son. After her death, the millennia-old Egyptian Empire fell to Rome.



JULIUS CAESAR
(100-44 BC)

A powerful Roman general who became Emperor, Caesar began an affair with Cleopatra during Rome's civil war of 49-45 BC. After he emerged victorious, he ran Rome as dictator, until his assassination in March 44 BC.



MARK ANTONY
(83-30 BC)

This general was made co-ruler of Rome in 43 BC. He became Cleopatra's lover in 41 BC and, later, her husband. They went to war with Antony's former co-ruler in 31 BC; the spouses lost, and committed suicide.

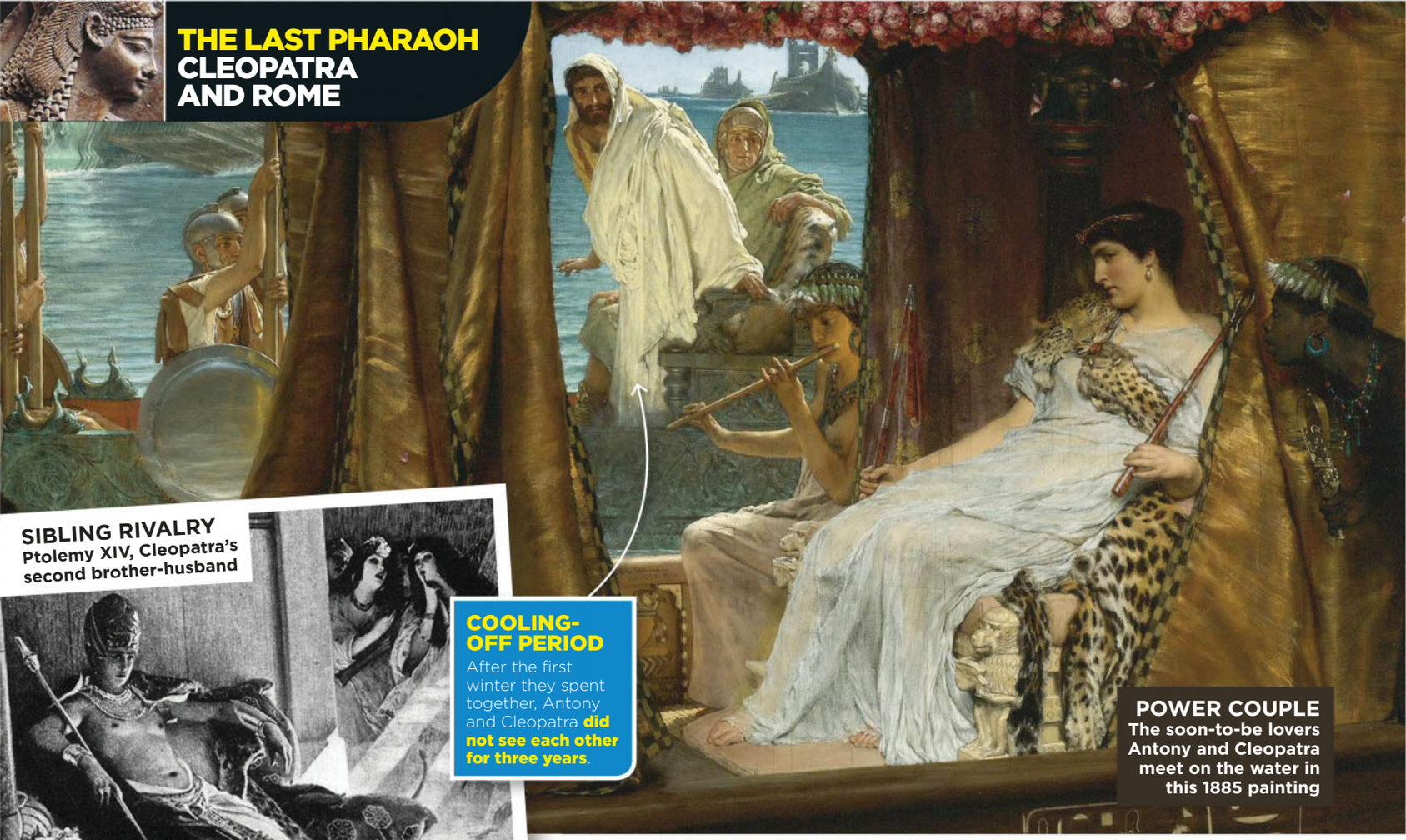


PTOLEMY XIII
(c61-47 BC)

Cleopatra's oldest brother and first husband, Ptolemy became co-ruler of Egypt with his sister in 51 BC. They jostled for sole power, with him banishing her at one point, until Ptolemy was killed by Caesar's forces.

ARSINOE IV (c63-41 BC)

The younger sister of Cleopatra, Arsinoe began her own bid for pharaonic power in 48 BC, when she rose up against the forces of Cleopatra and Caesar. After her defeat, Arsinoe ended up in the Temple of Artemis at Ephesus, where she was later executed on Antony's orders.



POWER COUPLE
The soon-to-be lovers Antony and Cleopatra meet on the water in this 1885 painting

SIBLING RIVALRY
Ptolemy XIV, Cleopatra's second brother-husband

COOLING-OFF PERIOD
After the first winter they spent together, Antony and Cleopatra **did not see each other for three years**.

1660
The year in which it became acceptable for the role of Cleopatra to be played by a woman on stage

In June 47 BC, Cleopatra gave birth to a son, Ptolemy Caesar, known as Caesarion – 'little Caesar' – although the child was never formally acknowledged by his father. The pair followed Caesar to Rome, where they were officially welcomed as "friends and allies of the Roman people".

INTOLERABLE HEIR

Beneath the veneer of its friendly exterior, Rome was furious. Caesar had no sons from his Roman wife, Calpurnia, and none from his previous wives. The idea of Caesarion – the son of a foreigner from a land despised as a pleasure-loving and decadent society – growing up to claim rule over 'civilised' Rome as Caesar's heir, was intolerable.

That situation never came to pass, however, as the Emperor named his grandnephew Octavian (who would take the name Augustus upon coronation) as his heir. When, in 44 BC, Caesar was assassinated, Cleopatra – a much-disliked figure in Rome, whose gold-covered statue stood in the city's temple of Venus Genetrix – fled with her son. Just months later, the Egyptian Queen's second brother-husband was also dead – likely on her orders – and Cleopatra was free to rule with her three-year-old son, and plan the infant's succession as Emperor of Rome.

Back in Rome, however, trouble was brewing. Disputes had broken out over who would succeed Caesar, with both Octavian and the Roman general Mark Antony seeking power. By 41 BC, the leadership had been split: Antony was governing the eastern region and Octavian, the west. Following Cleopatra's return, Rome had left Egypt in relative peace, but the Senate's eyes turned once more to the wealthy empire, when Antony decided he needed money to subdue his enemies in the Parthian Empire (now Iraq).

"[Cleopatra] came sailing up the River Cydnus in a barge with gilded stern and outspread sails of purple, while oars of silver beat time to the music of flutes and fifes and harps. She herself lay all along, under a canopy of cloth of gold, dressed as Venus in a picture, and beautiful young boys, like painted Cupids, stood on each side to fan her."

Like Caesar before him, Antony was captivated. "The attraction of her person, joining with the charm of her conversation, and the character that attended all she said or did, was something bewitching," Plutarch tells us. "It was a pleasure merely to hear the sound of her voice." Indeed, Antony was so taken with the Pharaoh that he

"CLEOPATRA SET OUT TO CHARM AND SEDUCE HER UNSUSPECTING OLD FRIEND"

Conveniently, Cleopatra had befriended Mark Antony during her time in Rome, and supported him militarily during the ensuing Roman civil war. She now agreed to meet him in Tarsus (modern-day Turkey) to discuss the prospect of Egyptian support in a war against the Parthians. In an echo of plans made seven years earlier with her former lover, Cleopatra set out for Tarsus to charm and seduce her unsuspecting old friend. This time, however, her entrance was somewhat grander. In Plutarch's words:

abandoned his original reasons for meeting at Tarsus. He left his wife to manage his affairs in Rome and his troops waiting for orders, while he spent the winter of 41–40 BC in Alexandria with Cleopatra. They were inseparable.

During his stay, Cleopatra gained Antony's support in ridding her of the one person who had the power to disrupt her absolute rule in Egypt: Arsinoe. Defeated in battle, Arsinoe had been banished to the Temple of Artemis in Roman-controlled Ephesus, in modern-day

GETTY X4, KOBAL X1, MOVIE STILLS X1

AS SEEN ON SCREEN

Capturing Cleopatra is a tricky task...

The character of Cleopatra is one that has been portrayed numerous times – from plays to pornography – evolving over time as perceptions of gender and sexuality have also changed.

But film representations – at least 29 of them – tend to say more about the time in which the film was made than of the historical facts.

In many portrayals of the Egyptian Queen, she is shown as a beautiful, often wanton, seductress, or a helpless victim of the men in her life, with little credit given to her formidable intellect, education (the equal to most men of her time) or role as political strategist and negotiator. But, in reality, even her beauty is disputed. Roman historian Plutarch stated that Cleopatra was not a physically seductive individual, instead relying on the charm and intelligence of her personality and presence.

Such portrayals are not helped by the fact that none of Cleopatra's own writings survive, and Roman historians have not been kind to her, writing her off as a mere figurehead and a woman of reckless ambition. Even ancient historians like Plutarch never actually met her, so their representations, too, have to be questioned.

We don't even know what Cleopatra looked like. Just a few coins remain that depict the Egyptian Queen – none of them flattering – yet her enduring image (courtesy of Elizabeth Taylor's 1963 Hollywood portrayal) is of a sharp, black bob, sweeping black eyeliner and thick fringe. However, Cleopatra may have actually been blonde, based on the fact that many of her ancestors are known to have had light-coloured hair.



SCREEN SIREN
Elizabeth Taylor in her iconic role as Cleopatra, in the 1963 epic

DRESSED TO IMPRESS
The budget for **Taylor's wardrobe** in *Cleopatra* (1963) was a **record-breaking $194,800**. In all, she had 65 costumes, including a cape made from **24-carat gold cloth**.

DRAMA QUEEN

Three of the best fictional Cleopatras

Antony and Cleopatra

Written in the early 1600s, Shakespeare's Cleopatra is often regarded as one of his most complex and developed characters, invoking both scorn and admiration in audiences. His Cleopatra is the epitome of Egypt: sensual, playful and passionate. She is happy to use subterfuge, but soon descends into confusion and jealousy.

Cleopatra

Starring Elizabeth Taylor and Richard Burton, 20th Century Fox's *Cleopatra* (1963) has provided some of the most iconic images of the Egyptian Queen and cost over $31 million to make. Echoing the feminist movement of the 1960s, Taylor's Cleopatra uses her wiles to bridge the gaps in equality between men and women.

Rome

Calculation is key to this 2005 depiction of the last pharaoh. In it, a highly sexualised Cleopatra beds one of Caesar's soldiers and claims the resulting child is the Emperor's. Exclusively Caucasian representations have been replaced with more accurate portrayals of Cleopatra's ethnicity, reflecting views that she may have been part African.







Turkey. In 41 BC, on Antony's orders and in scandalous violation of the sanctuary she'd been promised, Arsinoe was murdered on the temple steps. The following year Cleopatra gave birth to twins: Alexander Helios and Cleopatra Selene II.

Antony, however, had finally been forced to return to Rome to deal with the aftermath of his failed rebellion against Octavian. A political alliance known as the Second Triumvirate was formed between the two generals and a dignitary named Marcus Aemilius Lepidus. Recently widowed, Antony agreed to seal the peace deal with a marriage to Octavian's sister, Octavia Minor, in 40 BC. But Cleopatra was never far from Antony's mind and, in 37 BC, he returned to Alexandria where he fathered another son, Ptolemy Philadelphus, and Cleopatra and Caesarion were crowned co-rulers of Egypt and Cyprus.



THE FINAL SHOWDOWN
The three leaders – Cleopatra and Antony against Octavian – clash at Actium

THE END IS NIGH

For a happy ending, the story should end there. But it doesn't. Ever greedy for power, Octavian continued to campaign for sole power in Rome, successfully eliminating Lepidus from the Triumvirate. In 33 BC, allegedly in retaliation for Antony divorcing his sister, Octavian did the unthinkable: he declared war on the Egyptian Queen. Two years later, in 31 BC, the combined armies of Antony and Cleopatra took on Octavian's forces in a great sea battle at Actium, off Greece's west coast.

The battle was a disaster for the lovers. Victorious, Octavian invaded Egypt where he received the surrender of the defeated Roman forces. Antony's efforts to become sole ruler of the Roman world had ended and, first believing that his amour had forged an agreement with Octavian to ensure her own survival, and then that she had committed suicide, he attempted to fall on his sword in true Roman tradition. But even in this he failed, and his wounded body was taken to Cleopatra who, still very much alive, was hiding in a mausoleum.

"WITHOUT HER LOVER, CLEOPATRA WAS AT THE MERCY OF THE TRIUMPHANT OCTAVIAN"

There, Antony succumbed to his wounds, reportedly dying in his lover's arms. Cleopatra realised that without her lover and his troops, she and her beloved country were now at the mercy of the triumphant Octavian. Knowing she would be paraded around as his prisoner should she be captured, the proud Egyptian Queen chose to take her own life, reputedly by allowing a poisonous Egyptian cobra, or *aspis*, to bite her.

Rome had emerged victorious: the age of the Pharaohs was dead.

3
Caesarion's age upon becoming joint ruler of Egypt, with his mother Cleopatra

WHAT HAPPENED NEXT?

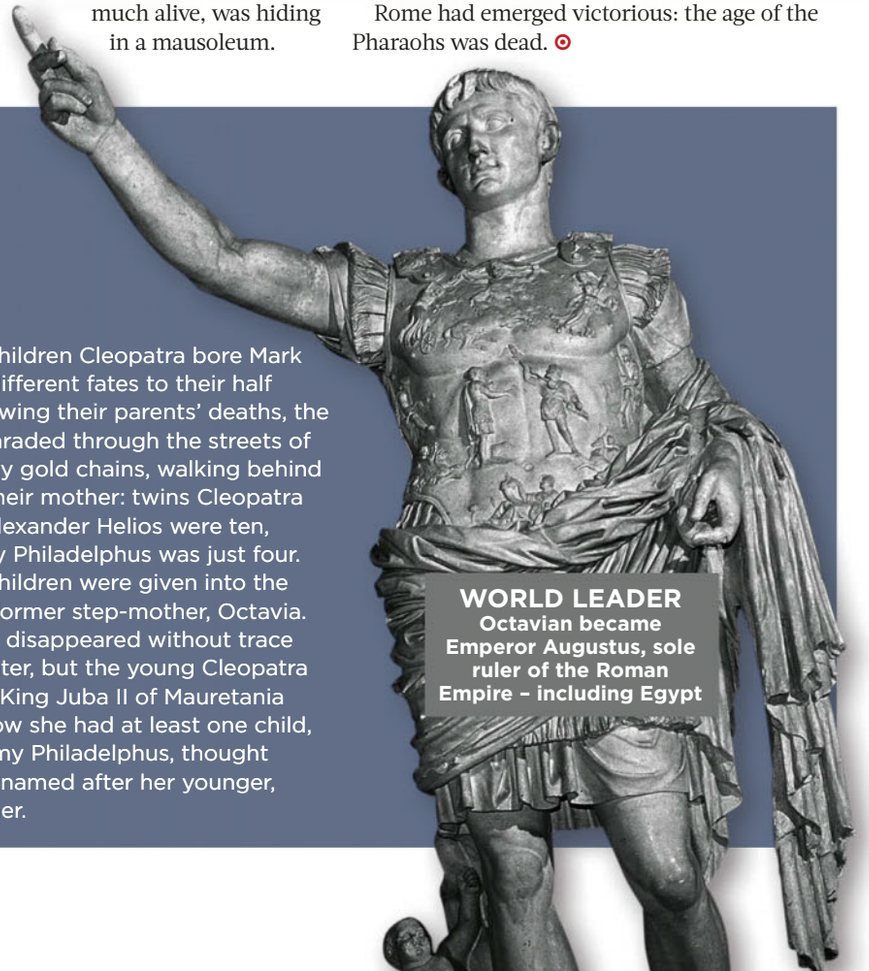
To the victor, the spoils...

Following the deaths of Cleopatra and Mark Antony, the victorious Octavian changed his name to Augustus Caesar and assumed sole control of Rome as its Emperor, administering to Egypt's people and controlling its treasury himself. But one last threat to his rule remained: Caesar and Cleopatra's son, Caesarion.

Advised by his confidant and philosopher Arius Didymus that "too many Caesars is not good", the new Emperor planned his rival's murder, luring Caesarion to Alexandria with false promises of his safety. The exact circumstances of Caesarion's death are unknown, but it is thought that he may have been strangled, after which Augustus took absolute control of Egypt.

The three children Cleopatra bore Mark Antony had different fates to their half brother. Following their parents' deaths, the three were paraded through the streets of Rome in heavy gold chains, walking behind an effigy of their mother: twins Cleopatra Selene and Alexander Helios were ten, while Ptolemy Philadelphus was just four.

The three children were given into the care of their former step-mother, Octavia. The two boys disappeared without trace a few years later, but the young Cleopatra later married King Juba II of Mauretania where we know she had at least one child, named Ptolemy Philadelphus, thought to have been named after her younger, missing brother.



WORLD LEADER
Octavian became Emperor Augustus, sole ruler of the Roman Empire – including Egypt

TWO TEMPLE PLACE & TOUCHSTONES ROCHDALE X1, ALAMY X1, GETTY X1, KOBAL X1

GET HOOKED

Want some more? Start your own quest – see, read and watch this lot...

LOCATIONS



▲ BEYOND BEAUTY: TRANSFORMING THE BODY IN ANCIENT EGYPT
This exhibition at Two Temple Place, London, explores the Egyptians' fascination with looks, in both in life and death. *www.twotempleplace.org*

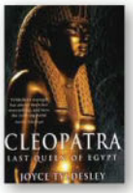
ALSO VISIT

- **Ancient Egypt gallery, British Museum,** *www.britishmuseum.org*
- **The Ancient Egypt Rediscovered exhibition at the Museum of Wigan Life, search at** *www.wigan.gov.uk*

BOOKS



THE STORY OF EGYPT (2015)
Joann Fletcher
In her complete story of the Ancient Egyptians, Fletcher spans 4,000 years, charting the rise and fall of the great civilisation.



CLEOPATRA: LAST QUEEN OF EGYPT (2008)
Joyce Tyldesley
Get to know Cleopatra VII even better with this lively and exciting biography, which offers intriguing insight and plenty of detail.

ALSO READ

- **The Oxford History of Ancient Egypt (2004)** *edited by Ian Shaw*
- **The Rise and Fall of Ancient Egypt (2011)** *by Toby Wilkinson*

ON SCREEN



CLEOPATRA (1963)
The last pharaoh gets the Hollywood touch with Elizabeth Taylor, Richard Burton and Rex Harrison in the lead roles.

ALSO SEE

- ***Tut* (2015), a mini-series focussing on the boy king**
- ***Ancient Egypt: Life and Death in the Valley of the Kings* (2013) a documentary by Joann Fletcher**

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EDWARD CURTIS: THE SHADOW CATCHER

Fearing that the Native Americans were at risk of disappearing for good, one man set out to keep their memory alive...

AT A GLANCE

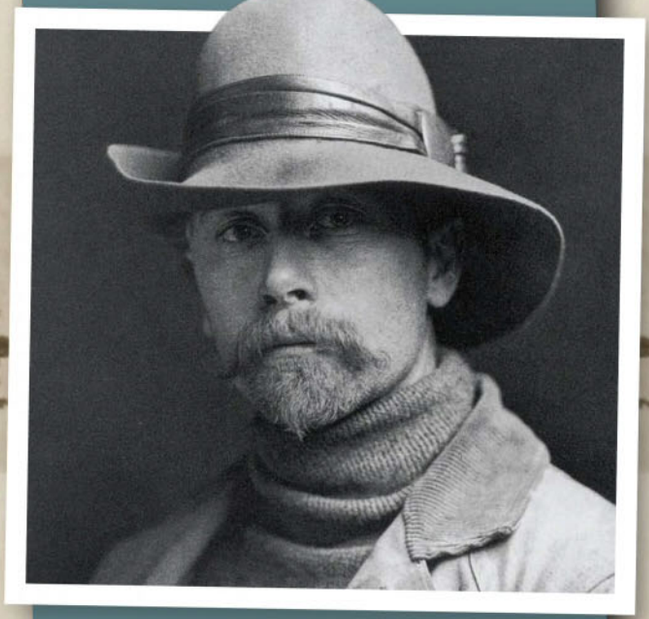
In 1900, American photographer Edward Sheriff Curtis embarked on a mission that consumed his life – documenting the cultures of Native American peoples before they were lost forever. For three decades, the arduous yet awe-inspiring work was his obsession, costing him his marriage and health as well as leaving him broke. But by 1930, 20 volumes of his stunning and poignant photographs had been published in his masterpiece, entitled *The North American Indian*. To some of the 80 tribes he spent time with, Curtis was the 'Shadow Catcher', but what he captured was something far more important: life.

DISAPPEARING LAND
The Klamath – whose chief is seen here, overlooking their sacred Crater Lake – used to thrive over 23 million acres. As the United States spread further west during the 19th century, Native American tribes lost their ancestral lands and were forced to resettle, most often in small reservations.

GETTY X2, LIBRARY OF CONGRESS X2

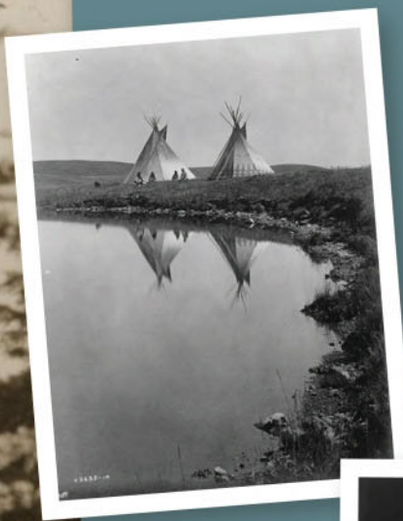
EPIC VOYAGE

Curtis traversed the length and breadth of North America, from the Grand Canyon to the Bering Strait



AMERICAN ADVENTURER

The charismatic and successful Curtis (above, in a self-portrait taken in the late 19th century) is 32-years-old when he decides to begin work on *The North American Indian*. The epiphany comes to him in 1900, after observing a Sun Dance of the Piegan peoples on the Montana plains, which leaves him, in his own words, "intensely affected".



LIVING ON THE EDGE

With $75,000, given by the finance titan JP Morgan, Curtis starts publishing portfolios in 1907, each focussing on a number of tribes he has lived with. The collection on the Piegan, including a tranquil shot of two teepees by the water's edge, features in one of his 1911 publications.



RAVEN RITUAL

A dancer of the Koskimo wears a raven mask (a sacred animal) and a coat of cormorant skins during a 1914 ceremony in British Columbia, Canada. Curtis and his team desire to capture the traditional side of Native American life, rather than focussing on the current hardships – such as forced relocations and assimilation.

IN THE WILDERNESS

As the West grows increasingly populated, with roads and railways dissecting the countryside, Native American tribes have to make their homes deep in the uncharted wilderness. Here, in 1904, we see Navajo riders slowly wind their way through the rugged Canyon de Chelly in Arizona. Curtis, who is travelling for months at a time, has to navigate rough terrain, risk disease and starvation, endure extreme weather and occasionally face unfriendly Native Americans, who are reluctant to welcome him into their tribe.

"I REGARD THE WORK YOU DO AS ONE OF THE MOST VALUABLE ANY AMERICAN COULD NOW DO."

US PRESIDENT THEODORE ROOSEVELT

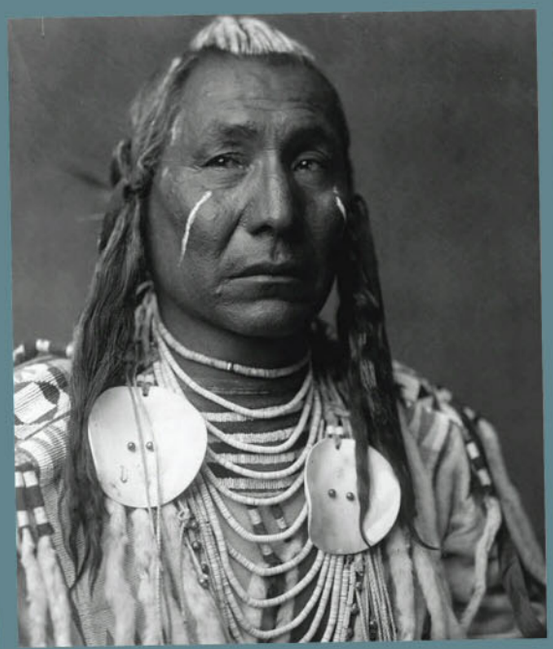
THE HAPPY COUPLE

Two ornate canoes pull up on shore, bearing a bride and groom (standing at the back) and the wedding party. From 1910 to 1914, Curtis spends a lot of time with the Kwakiutl people in British Columbia. He is so drawn to their rich culture and mysterious rituals that he dedicates a whole volume to them, as well as filming a ground-breaking documentary, ***In the Land of the Headhunters.***

ALAMY X2, LIBRARY OF CONGRESS X5

VANISHING TRIBES

He wasn't out to save native cultures – Curtis was in a race against time to record them before they were gone

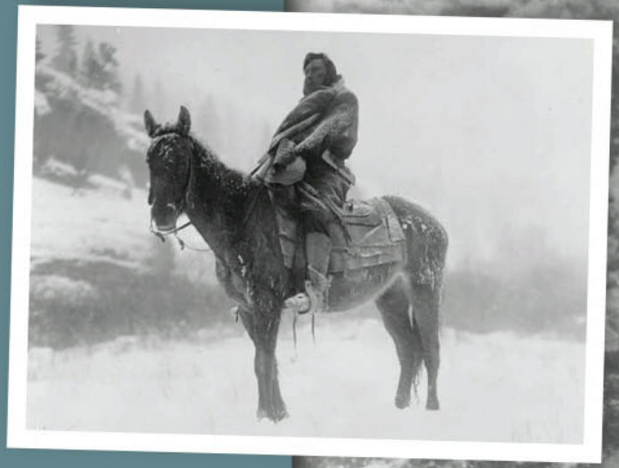


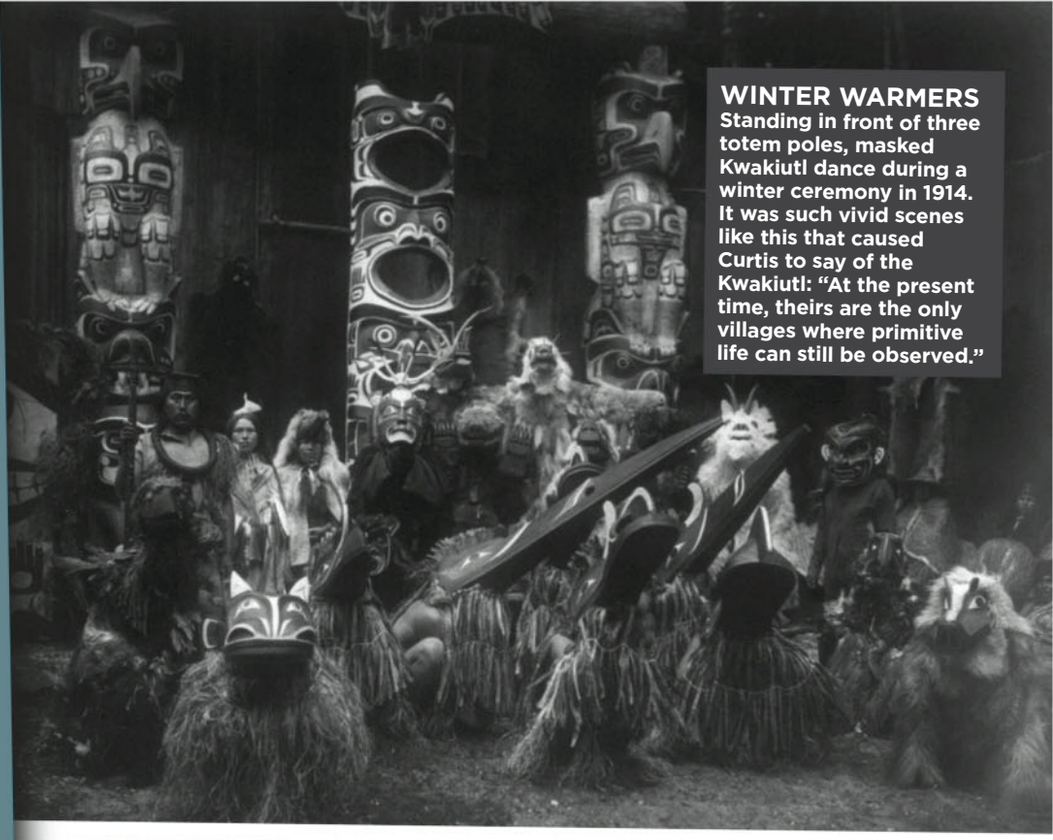
UP CLOSE AND PERSONAL
When looking at the hundreds of portraits Curtis took, what comes through most is the humanity of the subject. Whether they are a child or a warrior, Curtis challenges the perception of most white Americans with faces filled with both sadness and dignity. Curtis photographs many famous names – Geronimo and Red Wing (above) included.



MASTER POTTER
The Hopi people, living in Arizona, are well-known for their beautiful pottery, but Nampeyo is the finest of them all. Inspired by techniques and designs from the 15th century, she finds fame with her own style. Her work is still exhibited today.

SCOUT'S HONOUR
Curtis shows a deep respect for his subjects – such as this Apsaroke scout in 1908 – but he is also willing to manipulate a shot for the sake of art. He removes modern artefacts from a scene and even pays people to pose. Nevertheless, *The North American Indian* is a more honest and revealing collection about Native Americans than anything seen before.





WINTER WARMERS
Standing in front of three totem poles, masked Kwakiutl dance during a winter ceremony in 1914. It was such vivid scenes like this that caused Curtis to say of the Kwakiutl: "At the present time, theirs are the only villages where primitive life can still be observed."

GOT A BITE?
Using a dip net attached to a long pole, a Wishram fisherman leans precariously over the Columbia River. Despite the roaring current, it is possible, according to Curtis, for a man to catch several hundred salmon in a matter of hours.

CURTIS TOOK SOME 40,000 PHOTOS AND 10,000 AUDIO RECORDINGS OVER THREE DECADES

OASIS IN THE BADLANDS
In one of Curtis's most famous photographs, Red Hawk (a chief of the Oglala Sioux) feeds his horse in a small watering hole in the Badlands of South Dakota. According to Curtis, Red Hawk went on his first war party at the age of 11 and fought in a total of 20 battles, including against Custer at Little Bighorn in 1876.



HOME WITH THE HOPI
Probably more than any other of the 80 tribes he spends time with, Curtis is completely enthralled by the Hopi. As well as photographing nearly every aspect of their lives – these four young women from c1906 are grinding corn – he is permitted to be involved in their legendary Snake Dance ceremony.

LIBRARY OF CONGRESS X6, GEORGE EASTMAN HOUSE/GETTY IMAGES X1

MAGNUM OPUS

The North American Indian was hailed as "the most ambitious enterprise in publishing since the King James Bible"



THE KAYAK KIDS

To finish his masterpiece, Curtis (joined by his daughter, Beth) journeys to Nunivak Island in the Bering Sea. Their ship is temporarily stranded on the perilous voyage, but Curtis is rewarded with beautiful photographs of a local Eskimo tribe, including a shot of two boys smiling from a kayak.



A NEW ANGLE

The 20th volume of *The North American Indian* is published in 1930. Although people had been struck by his portraits of figures like Two Whistles (seen in 1908, with hawk headdress) in previous years, interest plummets in the wake of the Great Depression. Less than 300 sets are sold, and Curtis – who never receives a salary for his work – suffers a break-down.



TOUGH AS HIDE

He dedicated 30 years of his life, obsessively compiling images of Native American cultures and everyday life (here, we see a Montana women scraping hide with a stone). But when Curtis dies, aged 84, in 1952, he is almost entirely forgotten. It is not until the 1970s that *The North American Indian* enjoys a revival and Curtis is recognised as one of the great American photographers.



FAMILY TIES

He may be capturing touching moments of family bliss, such as this Assiniboin mother sitting peacefully in a birch forest with her new child, but Curtis's own family life deteriorates. His obsessive pursuit of his work results in the acrimonious end of his marriage in 1919.

THE OATH

In 1908, Curtis witnesses an Apsaroke man make an oath in front of two fellow tribesmen, by skewering a piece of meat on an arrow and raising it to the Sun. By 1930, the ageing and destitute Curtis sees the fulfilment of his own oath, made three decades earlier – to record Native American cultures before they are lost. By doing so, he ensured that, in some way, these proud people became immortal.

The biggest tank battle in history?



FIRE OF WAR
A German Tiger I tank storms through a burning Soviet village

GETTY X2

World War II saw one of the most epic tank battles in history, as the Germans and the Soviets clashed near Kursk. **Julian Humphrys** tells the story...

The summer of 1943 saw the German army mount a risky operation that made even Hitler nervous. "Whenever I think of this attack, my stomach turns over," he told a subordinate. Soviet advances after the Battle of Stalingrad and subsequent German counter-attacks had left a huge salient, or bulge, sticking out into the German-held territory around Kursk in the Ukraine. Hitler's plan, which was code-named Operation Citadel, was to mount attacks from the north and south in order to cut off and surround the Russian troops in the salient. Success would also give the overstretched German army a shorter front line to man.

To build up the force to carry out this ambitious plan, the Germans brought in troops, tanks and planes from other sectors of the front. In the end, 70 per cent of all their tanks and nearly two-thirds of their aircraft in the east were committed to the operation. But would it be enough? Conventional military wisdom states that, to have a chance of success, an attacking force needs to outnumber the defender by three-to-one but, at Kursk, the invaders had no such advantage. Despite their efforts, the Germans around Kursk were still heavily outnumbered.

Hoping quality would defeat quantity, the Germans put their faith in their new tanks – medium Panthers, heavy Tigers and monstrous 'Ferdinand' self-propelled guns (essentially a huge gun fixed to a tank chassis). They hoped these cutting-edge war machines would overwhelm the Russian defences, creating a breakthrough that the rest of their armoured force could then exploit.

RUSSIAN INTUITION

But the Russians were ready for them. The salient had always seemed the obvious place for the Germans to attack and Russian intuition was confirmed by intelligence passed to them by their Western allies.

In order to build up his forces and allow the new German tanks to join his army, Hitler delayed the push. The Russians used their extra time well, constructing some of the most formidable field defences ever put in place by a defending army. Before they could get anywhere near the Russian fortifications around Kursk, the attacking Germans would have to fight their way through miles of anti-tank ditches, minefields and barbed-wire entanglements all while doing battle with thousands of tanks and facing fire from the 25,000 guns the Russians had assembled in the area. In key places, there were anti-tank guns every ten metres.

The German attacks began in earnest early on 5 July and, almost immediately, it became clear they had underestimated their Russian adversaries. A massive Soviet counter-bombardment began shortly before the attack was due to start, confirming the Germans had



ARMOURED BEAST
With thick armour and a powerful gun, the German Tiger I was a monster. But it was **expensive to build** and **fewer than 1,500** were produced during the war.

BATTLE CONTEXT

Who
Soviets 1.9 million men, 5,100 tanks, 25,000 guns 2,400 aircraft
Germans 900,000 men, 2,700 tanks and assault guns, 10,000 guns, 1,800 aircraft

When
July-August 1943

Where
Kursk, Ukraine

Why
The Germans planned to cut off the Kursk salient with a pincer attack

Outcome
Soviet victory

achieved no surprise whatsoever, and the extensive field defences in their path ensured progress was painfully slow.

While it was true that the heavy German tanks often proved impervious to the Soviet anti-tank guns – one Russian soldier described how 45mm shells bounced off the Tiger tanks like peas – their tracks remained vulnerable to the anti-tank mines. Another threat came from the Soviet soldiers, who ran forward with spare mines to place in the attacker's path, or to throw grenades, Molotov cocktails and satchels of explosives at the advancing German tanks. Lacking a hull-mounted machine gun, the Ferdinands fared particularly badly, as they were unable to repel these primitive-but-effective infantry attacks.

300,000
The number of Soviet civilians put to work on the field defences around Kursk

RAIN OR SHINE

The weather during the battle alternated between blazing heat and pouring rain, coating the combatants in dust on one day, bogging them down in mud the next. Inside the scorching tanks, heat exhaustion was commonplace as sweating crewmen struggled to load the tank guns with their heavy shells. Many debilitated Germans kept going by taking Pervitin. Nicknamed *Panzerschokolade* or 'tank chocolate' by the soldiers, these highly addictive pills contained methamphetamine, helping to fight fatigue and increase self-confidence. More than 200 million were handed out during the war.

After four days' heavy fighting, the German attack from the north, led by Field Marshal Walter Model, began to run out of steam. His men had inflicted terrible casualties on the Russians, having destroyed hundreds of tanks, but the Soviet numerical advantage was just too great. No sooner had the Germans destroyed a unit of Russian tanks than another appeared in its place. Russian reserves of men and equipment seemed limitless. To make matters worse, the Germans were now coming under fire from ground-attack aircraft. After advancing a mere eight miles, the German attack ground to a halt.

Field Marshal Erich von Manstein's forces in the south ran into the same difficulties but, after a slow start, the pace of their advance began to pick up. On 7 July, it briefly looked as though von Manstein's troops might break through the main Russian defence zone. But the Soviets rapidly deployed reinforcements, and the German advance slowed once again. Even so, they pushed

PLAN OF ATTACK

The German plan was to pinch out the Kursk salient by attacking from the north and south. But stubborn Russian resistance meant the Germans made only limited advances – shown in red on the map below.







ANTI-TANK GUN
The Soviets deployed thousands of such guns in a bid to stop the German armoured onslaught.



HEAVY METAL
L-R: **A German self-propelled gun attempts to cross a ditch near Belgorod; Soviet gunners load an anti-tank gun; the Soviets' anti-tank guns – seen here on wheels – were less effective than hoped**

KEY PLAYERS

Between them, these four men commanded around 2.8 million men, 8,000 tanks and 4,200 aircraft...



FIELD MARSHAL ERICH VON MANSTEIN
Commander of the southern German pincer. He had been key in the defeat of France in 1940 and, earlier in 1943, had stabilised the front after German failure at Stalingrad.



FIELD MARSHAL WALTER MODEL
Commander of the northern German pincer. Nicknamed the Führer's Fireman, Hitler considered Model one of his best generals. He committed suicide at the end of the war.

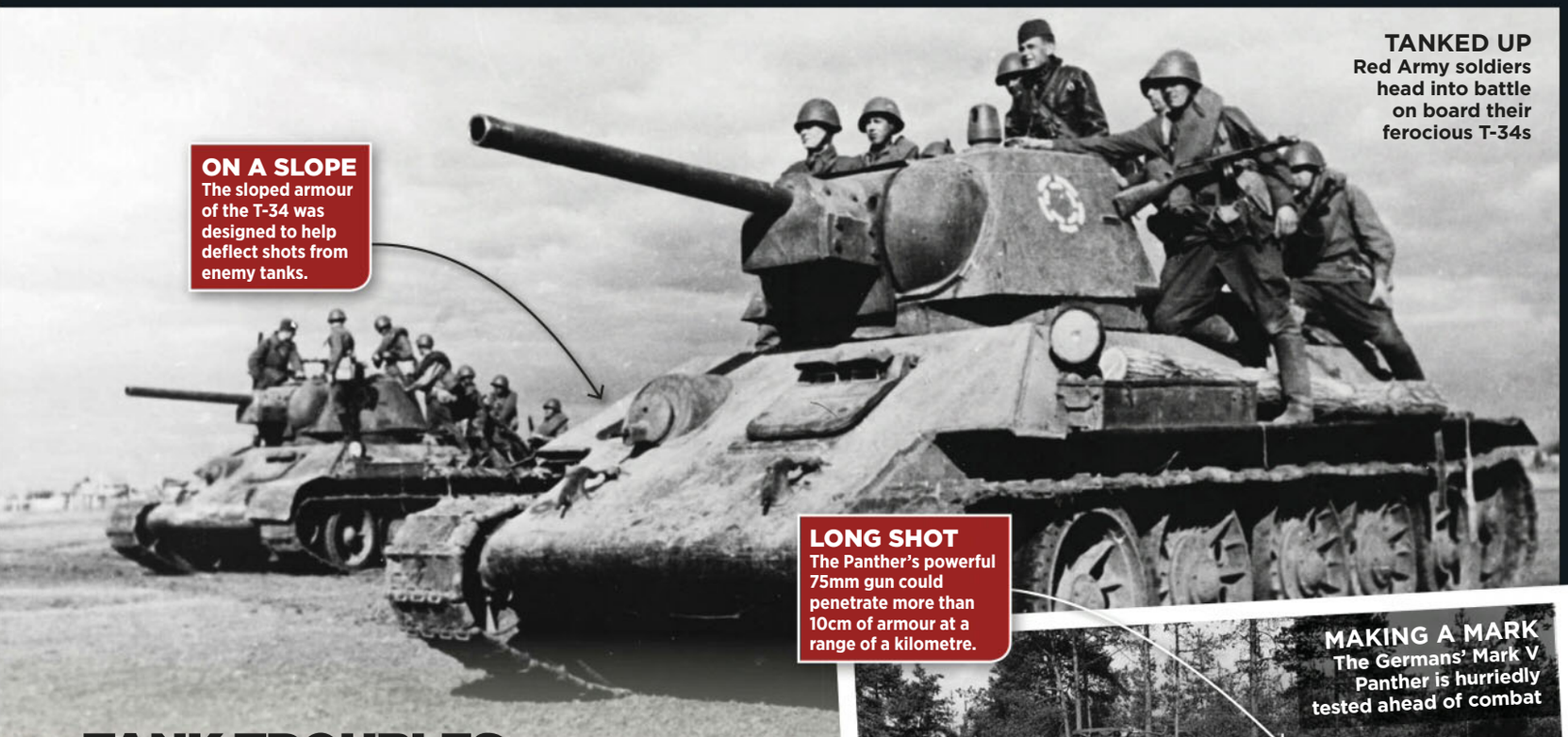


GENERAL NIKOLAI VATUTIN
Soviet Commander of the southern sector of the Kursk salient. He was mortally wounded in an attack by Ukrainian nationalists in February 1944.



GENERAL KONSTANTIN ROKOSSOVSKY
Soviet Commander of the northern sector of the Kursk salient. He had survived arrest, torture and imprisonment during Stalin's purge of army officers in 1937.

ALAMY X2, GETTY 9, TOPFOTO X1



TANKED UP
Red Army soldiers head into battle on board their ferocious T-34s

ON A SLOPE
The sloped armour of the T-34 was designed to help deflect shots from enemy tanks.

LONG SHOT
The Panther's powerful 75mm gun could penetrate more than 10cm of armour at a range of a kilometre.



MAKING A MARK
The Germans' Mark V Panther is hurriedly tested ahead of combat

TANK TROUBLES

The appearance of the Soviet T-34 tank in 1941 had come as a major shock to the German high command. The T-34 was superior to their own tanks and its effectiveness was only really restricted by the poor training of its crews.

Faced with this challenge, the Germans quickly began work to improve the design of their existing tank models and produced new tanks that could take on and beat the T-34. One of the most famous was the Mark V Panther. With better armour and a more powerful gun than the T-34, the highly useful tank was more than a match for its Russian enemy on the battlefield. But it was not without its problems. Rushed into service without proper testing, it could be unreliable and many Panthers broke down before they even reached the action.

HITLER'S PRAETORIAN GUARD THE WAFFEN-SS

The Waffen-SS was the military wing of the *Schutzstaffel* (SS) – the Nazi party's vast paramilitary organisation. Though under operational control of the German army, the Waffen-SS remained a separate entity, ultimately responsible to Heinrich Himmler, the Reichsführer-SS.

Normally identifiable by the lightning flashes or skulls on their collars, or their mottled camouflage combat uniforms, these soldiers held a fearsome fighting reputation at the time of the battle at Kursk. Three SS divisions fought there, and many of the members captured by the Soviets were shot out of hand.





PERVITIN
Many German soldiers took this early form of crystal meth to help them cope with the strains of battle.

BAD REPUTATION
Soldiers of the German Waffen-SS, who instilled great fear in their enemies

ACTION IN THE AIR

Kursk may be known for the size of its tank battles, but the clashes in the skies were also some of the largest in history. Both sides had assembled thousands of planes, which duelled in the air, attacked enemy airfields and swooped down to bomb and machine-gun enemy targets on the ground.

Though their orders were to concentrate on ground targets, the Luftwaffe initially took a heavy toll of the Soviet air force. But they were hampered by a lack of fuel and gradually the Russians gained air superiority. Soon they were bombing German airfields on a nightly basis.

THE HIGH DIVE
Luftwaffe Junkers Ju-87D Stuka dive-bombers



THE SOUND OF TERROR
Stuka dive-bombers were fitted with sirens that let out a terrifying wail as they swooped down on their targets.

HELL FROM ABOVE
Soviet attack aircraft, Ilyushin Il-2 Sturmoviks



on and, by 11 July, the armoured divisions of the elite II SS Panzer Corps had reached the outskirts of the small town of Prokhorovka, 50 miles south east of Kursk.

That night, as the German forces rested in a forest before attacking Prokhorovka, they heard an ominous sound – the rumble of hundreds of tank engines. The Russians were planning a counter-attack of their own.

POINT-BLANK RANGE

The following day, the two sides clashed in what has often been described as the largest tank battle in history. In fact, other battles had involved more tanks but never before or since have so many armoured vehicles – over 800 in all – clashed at point-blank range.

5,592
The total length, in miles, of trenches dug by the Russians to defend the Kursk salient

That this was the case was down to the Russians. They believed that if they fought at a distance they would simply be picked off by the German tanks' superior guns. This, they believed, was their only chance to get in close where their own guns would be more effective. As the German tanks emerged from the forest and moved into open ground, General Rotmistrov, Commander of the Russian 5th Guards Tank Army gave the code word "*Stal, Stal, Stal*" ('Steel, Steel, Steel'), and 600 Russian tanks charged towards the Germans.

Rudolf von Ribbentrop, the son of the German Foreign Minister, commanded a company of tanks in the battle, and he later described the scene:

"We halted on the slope and opened fire, hitting several of the enemy. A number of Russian tanks were left burning... I looked around as was my habit. What I saw left me speechless. From beyond the shallow rise about 150-200 metres in front of me appeared 15, then 30, then 40 tanks. Finally there were too many to count. The T-34s were rolling towards us at high speed."

Soon the battle degenerated into a confused melee; tanks burned on all sides and all command was lost. Some tanks rammed each other, others exploded as their ammunition caught fire, sending their turrets flying into the air.

Crewmen escaped from their blazing tanks with their clothes on fire and desperately rolled on the ground to extinguish the flames. Others were less fortunate and died, screaming, in their blazing iron coffins. When dusk finally brought an end to the fighting, the two sides pulled apart.

The fields had become a tank graveyard; they were littered with burned-out hulks, some still pouring black, oily smoke into the air. Despite having lost some 200 tanks to the Germans' 50, the Russians remained unbeaten.

The following day Hitler called off the operation. The Russians were already counter-attacking north of Kursk and, with the news that the Allies had invaded Sicily, Hitler needed to withdraw troops from the eastern front to defend Italy. When the Russians also began a counter-attack south of Kursk, the exhausted Germans had no choice but to carry out a fighting retreat – they fell back 150 miles on a 650-mile front in two-and-a-half months. The great German gamble had failed.





SOVIET POWER
ABOVE: **An ironclad horde of Red Army T-34 tanks advances near Prokhorovka**
RIGHT: **Exhausted, a Nazi gunner is taken prisoner**

"The Germans heard an ominous sound – the rumble of hundreds of tank engines"



OPERATION BAGRATION
Soviet soldiers force German troops out of the city of Vitebsk

WHAT HAPPENED NEXT?

Kursk put the Germans on the back foot

In their failed bid to eliminate the Kursk salient, the Germans had suffered disastrous losses in men, tanks and planes. While Soviet casualties had been much heavier, they were better able to make good their losses. Unlike the Germans, they enjoyed a vast pool of manpower, plus their arms industry wasn't hampered by a shortage of raw material nor was it regularly disrupted by enemy bombing.

The Germans were now firmly on the defensive and defeat was only a matter of time. Though they would continue to win local successes, the Germans were steadily pushed back by the sheer numbers that the Russians deployed against them. The following summer, the Soviets launched Operation Bagration, a major offensive in Belorussia (today, Belarus). The German front caved and, in just five weeks, the Russians advanced over 435 miles to the outskirts of Warsaw. Eight months later, they were at Berlin's door.

GET HOOKED!

Find out more about the battle and those involved

MUSEUM
For a close-up look at some of the types of tank involved in the Battle of Kursk, make tracks for the Tank Museum at Bovington in Dorset.
www.tankmuseum.org

WHAT DO YOU THINK?
Was the Battle of Kursk a key turning point in World War II?
Email: editor@historyrevealed.com

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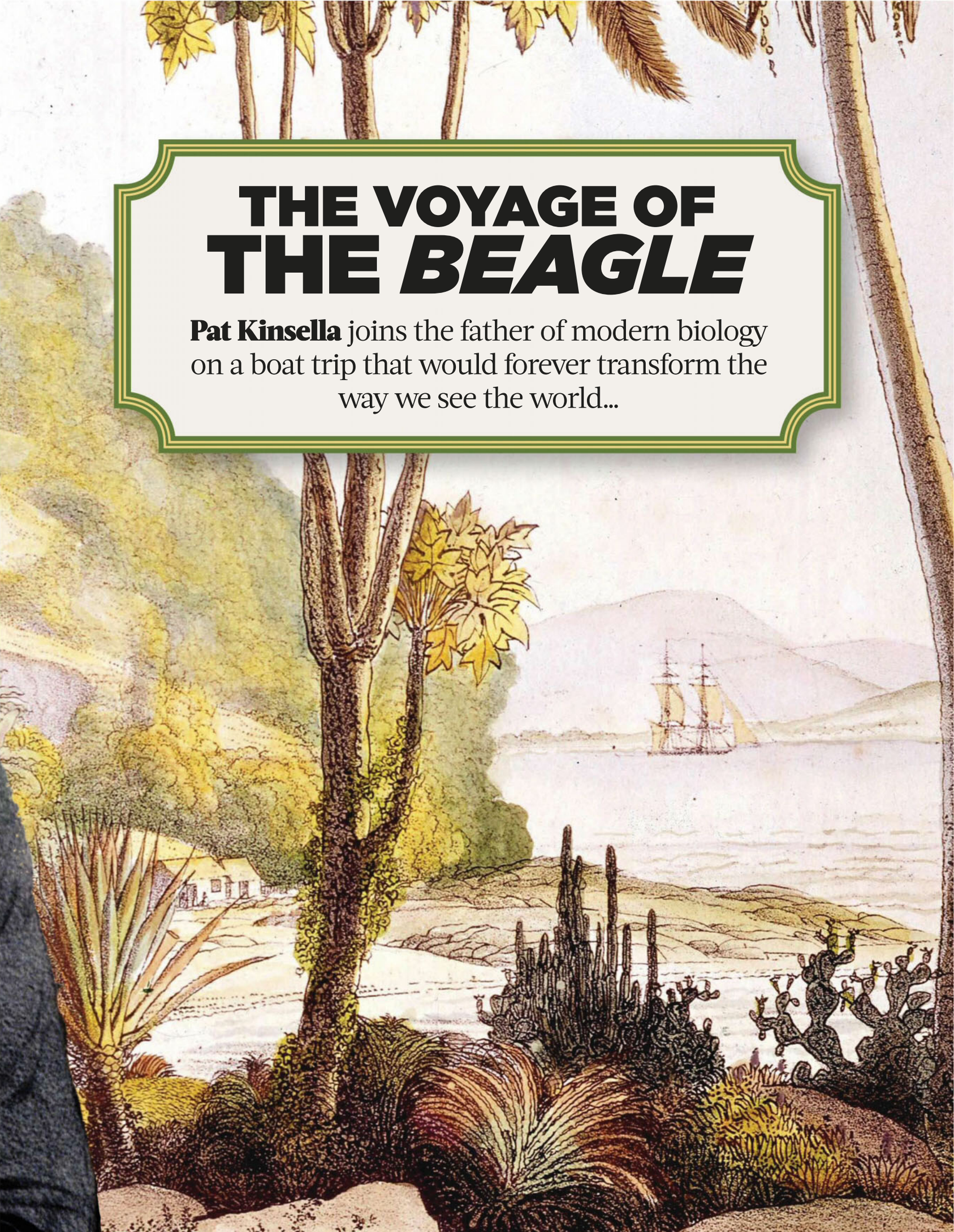


TRAVEL BROADENS THE MIND
The *Beagle* sails off from the coast of Brazil, with a young Charles Darwin – influential ideas forming in his head – on board

"It never occurred to me, that the productions of islands only a few miles apart, and placed under the same physical conditions, would be dissimilar"

Darwin nearly misses his biggest discovery on the Galápagos

SCIENCE PHOTO LIBRARY X1, TOPFOTO X1, ISTOCK X1



THE VOYAGE OF THE *BEAGLE*

Pat Kinsella joins the father of modern biology on a boat trip that would forever transform the way we see the world...



DARWIN AND THE *BEAGLE*

When HMS *Beagle* set sail from Plymouth Sound on 27 December 1831, under the command of Robert FitzRoy, its captain and crew – including recent arts graduate Charles Darwin – expected their voyage to last 24 months. Five years later, the brig returned. The ship had circumnavigated the planet, while Darwin collected specimens and began developing a theory that would revolutionise everything our species knew about the world.

Darwin's findings questioned and then eclipsed prevailing notions of creationism pedalled by religious establishments, but when he boarded the *Beagle*, the 22-year-old didn't mean to rock the boat. He was preparing to embark on a career as a country clergyman, and appeared destined for life as a parson with a passionate interest in nature. Instead, this epic adventure set him on a path that led to a place in the pantheon of science.

THE *BEAGLE* BUNCH

Built in 1820 as a Cherokee-class, ten-gun brig-sloop, the *Beagle* was later refitted as a survey barque. At that time, the British had a keen eye on South America, where several nations had recently won independence from Spain and, in 1826, the *Beagle* embarked on a hydrographical survey of Patagonia and Tierra del Fuego, initially under the captainship of a Pringle Stokes. When Stokes took his own life in Tierra del Fuego, he was ultimately replaced by former flag lieutenant Robert FitzRoy – a 23-year-old who'd been in the Navy since the age of 13.

The *Beagle* returned to England with four Fuegians on board – two men, a boy and a girl – captured by the crew while in pursuit of a stolen boat in Tierra del Fuego. Nicknamed York Minster, Fuegia Basket, Jemmy Button and Boat Memory, these bewildered figures became the subjects of an experiment by FitzRoy, who intended to 'civilise' them with English manners and a Christian education, and then return them home to spread the word. Boat Memory died of smallpox in England, but FitzRoy persevered with his plan when he was commissioned to captain a second South American survey.

After Stokes' suicide, FitzRoy, a complex man also prone to depression, wanted a self-funded scientist to accompany him on the expedition, as a gentleman companion. The position was offered to botany professor Reverend John Stevens Henslow, who instead put forward his pupil and protégé Charles Darwin.

The *Beagle* initially departed Devonport on 10 December, but was delayed in Plymouth (*see 1 on map, right*) by bad weather and then Christmas drunkenness. When the vessel eventually weighed anchor, Darwin instantly became sea sick and began questioning the wisdom of his mission. He was confined to his cabin for some time, completely missing Madeira, their first port of call.

THE MAIN PLAYERS



CHARLES DARWIN

Darwin simply wanted to see the tropics before settling down as a parson. Instead, the adventure led him to publish theories that remain the base for modern biology. He died in 1882, aged 73.



CAPTAIN ROBERT FITZROY

A brilliant captain and pioneering meteorologist, he invented the word 'forecast'. Cartography from his surveys was used until WWII. Plagued by depression, he committed suicide in 1865.

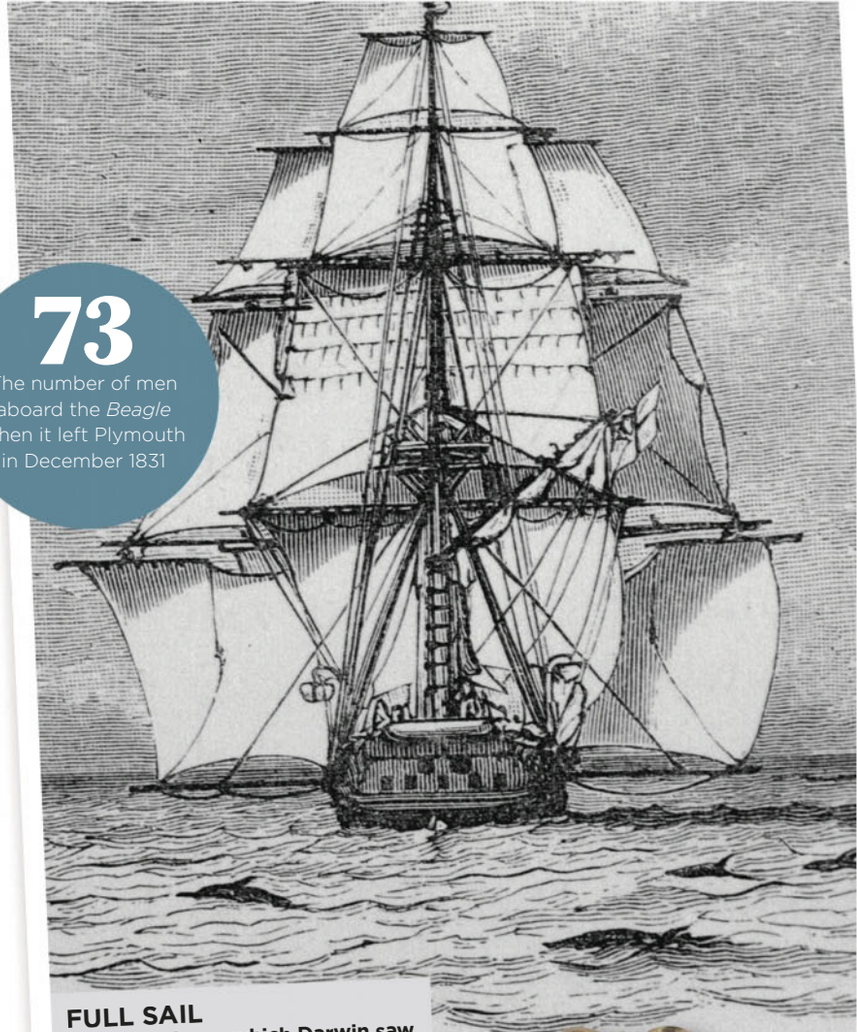


JOHN STEVENS HENSLOW

Clergyman, geologist, botanist and University of Cambridge professor. Henslow proposed Darwin for the expedition, but dismissed his theory of natural selection.

73

The number of men aboard the *Beagle* when it left Plymouth in December 1831

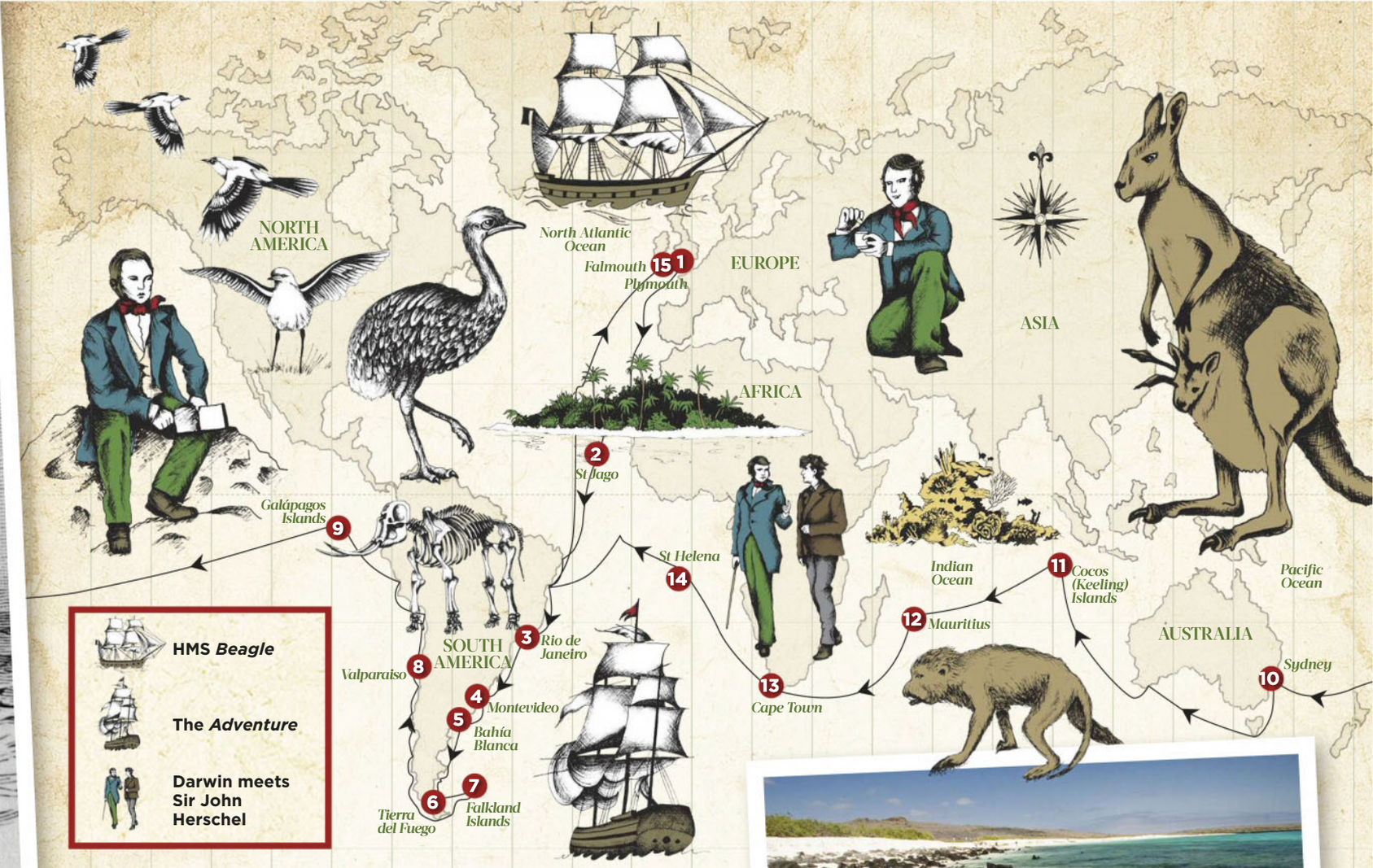


FULL SAIL
HMS *Beagle*, on which Darwin saw the world, gathered samples and took notes that would be vital to his groundbreaking theories



SAMPLING ON THE SEAS
L-R: **One of the marine chronometers from the *Beagle*, used to determine longitude; Darwin's pocket sextant, a celestial navigation device; small lizards, captured and preserved by the naturalist on his trip**

ILLUSTRATION: SUE GENT, ROYAL GEOGRAPHICAL SOCIETY X1, ALAMY X3, GETTY X1, PA X1, TOPFOTO X1, SUPERSTOCK X1



JOURNEY OF DISCOVERY

Suffering from seasickness, Darwin made the most of the *Beagle*'s many stops, spending a total of three years and three months of the five-year trip on land, looking for specimens. In South America he rode with gauchos, smoked cigars and slept in the open. His biggest discoveries, however, took place on the smallest islands – particularly the Galápagos – where differences between birds and animals held evidence of evolution.



TREASURE ISLANDS
The Galápagos Islands of the Pacific were a rich source of evidence for Darwin

1 PLYMOUTH SOUND, UNITED KINGDOM
27 December 1831

After delays caused by bad weather and over-exuberant Christmas celebrations, the *Beagle* sets sail on her second voyage of discovery, with young gentleman naturalist Charles Darwin aboard.

2 SANTIAGO, CAPE VERDE ISLANDS
16 January 1832

Darwin's journal begins here. The *Beagle* stays for 23 days while Captain FitzRoy takes magnetism measurements. Darwin notes evidence of changing sea levels and collects specimens with ship's surgeon Robert McCormick – but tensions arise between the two men.

3 RIO DE JANEIRO, BRAZIL
April – July 1832

Darwin spends his first extended period on land, exploring Rio Macaé and Botafogo Bay. The expedition loses two crew members to malaria and the ship's surgeon Robert McCormick leaves in protest at Darwin's preferential treatment.

4 MONTEVIDEO, URUGUAY – BUENOS AIRES, ARGENTINA

Between 1832 and 1834, the *Beagle* passes up and down the Patagonian coast several times. Darwin makes repeat visits to the Rio de la Plata cities and Montevideo Bay, fossil hunting and dodging revolts.

5 BAHÍA BLANCA, ARGENTINA

Darwin passes through this city several times during his overland forays, and makes some of his most significant fossil discoveries in the nearby city of Punta Alta.

6 TIERRA DEL FUEGO
December 1832 – January 1833

After initially visiting in December 1832, the *Beagle* returns in January 1833. FitzRoy builds a rudimentary mission at Woolya Cove in the Beagle Channel, where he leaves Reverend Richard Matthews and three abducted Fuegians in a failed attempt to 'civilise' the local populace. The *Beagle* finally passes through the Straits of Magellan in June 1834.

7 FALKLAND ISLANDS, SOUTH ATLANTIC
1833-34

The *Beagle* visits twice between 1833 and 1834, when Britain is reasserting its control. The crew provides security and helps quell a revolt. FitzRoy buys a second boat, which he names the *Adventure*. Darwin finds little of interest beyond a wolf-like fox, the warrah, which he correctly predicts is on its way to extinction.

8 VALPARAISO, CHILE
July 1834

Darwin again explores inland, reaching Santiago and the foothills of the Andes. In Chile, Darwin contracts Chagas' disease and experiences the effects of a major earthquake and volcanic eruption, which influence his theories about the formation of the world.

9 GALÁPAGOS ISLANDS, PACIFIC OCEAN
15 September 1835

Darwin notes differences between mockingbirds caught on separate islands, and the fact that giant tortoises have shell shapes that also vary from island to island – planting the seed that will grow into the theory of natural selection and evolution.

10 SYDNEY, AUSTRALIA
January 1836

Darwin goes on trips into the Australian interior and has his first encounters with marsupials, which he finds extraordinary.

11 COCOS (KEELING) ISLANDS, INDIAN OCEAN
April 1836

Darwin explores his theory that coral atolls and reefs are formed when volcanic islands sink below the sea level.

12 MAURITIUS, INDIAN OCEAN
29 April 1836

The dodo has already been extinct for nearly two centuries by the time Darwin arrives, but he studies the effects of introduced animals to the island's ecology.

13 CAPE TOWN, SOUTH AFRICA
May 1836

Darwin and FitzRoy meet pioneering astronomer, mathematician and botanist Sir John Herschel, whose work will heavily influence Darwin as he documents his theories. The *Beagle* rounds the Cape of Good Hope on 31 May.

14 ST HELENA, SOUTH ATLANTIC
July 1836

Darwin continues his study of island species and their isolated evolutionary direction, and describes the island as "a little centre of creation".

15 FALMOUTH, UNITED KINGDOM
2 October 1836

The *Beagle* finally returns home and Darwin begins the long process of sorting through his specimens and writing up his theories.



FINE SPECIMENS
L-R: **The giant land tortoises of the Galápagos islands, which fed into Darwin's theory of evolution; various specimens taken by the scientific explorer from the Cocos (Keeling) Islands; the *Camarhynchus psittacula*, or large tree-finch – one of many birds whose beak shape intrigued Darwin; a Ceroglossus beetle that Darwin found in the Andes**

In Tenerife, faced with 12 days' quarantine because of a cholera outbreak in England, FitzRoy ordered the ship to proceed straight to the Cape Verde Islands. On Santiago (*2*), Darwin found a band of seashells 18 metres up a cliff face. He noted this as evidence of dramatic change in global sea levels, which seemed to support a controversial concept, previously put forward by geologist Charles Lyell, that the world had slowly changed over a huge period of time – this would be influential on Darwin's theories.

The *Beagle* crossed the equator on 16 February and, 12 days later, reached Brazil (*3*). For two months, Darwin roamed Rio de Janeiro and its surrounds, collecting specimens. He explored rainforests around Rio Macaé and Botafogo Bay, while FitzRoy surveyed the Abrolhos Archipelago. Two crew members died of malaria in Brazil, and the ship's surgeon, Robert McCormick – upset at playing second fiddle to Darwin – resigned and returned to England.

£1,200
The total cost of Darwin's trip (largely footed by his dad, Dr Darwin)

On 26 July, the *Beagle* arrived in Montevideo (*4*), where FitzRoy surveyed the Rio Paraná and sent 50 of his men to help local officials quell a riot. Here, Darwin shipped the first batch of specimens and notes back to his mentor, Reverend Henslow, wracked with doubt about the quality of his work.

FOSSIL HUNTER

Darwin spent several weeks collecting specimens in Patagonia, around Bahía Bianca (*5*). There, he discovered huge fossil bones in a cliff at Punta Alta, which later proved to belong to long-extinct and previously unknown creatures including giant sloths and armadillos. Further south down the coast, he also found the bones of a llama-like, humpless camel.

The expedition departed Montevideo on 27 November, and Tierra del Fuego was sighted on 18 December. For a month, the *Beagle* was battered by tempestuous seas around Cape Horn, once almost capsizing – an incident that caused the loss of a significant stash of Darwin's specimens.

Eventually, in smaller boats, FitzRoy and a landing party – including Darwin – entered the Beagle Channel (named after the ship during its previous expedition) and travelled along Ponsonby Sound to Woolya Cove (*6*). Here, the three surviving Fuegians were deposited, dressed in European clothing and armed with bags of trinkets and utterly useless gifts (such as tea sets) from a well-meaning British public.

The party built a small missionary post and, on 27 January 1833, Darwin and FitzRoy farewelled Reverend Richard Matthews, who remained behind with the three Fuegians to man the mission. Nine days later, when FitzRoy returned to see how his Anglicised ambassadors were progressing, he was disappointed to find that the site had been looted. Matthews had already had enough, and rejoined the Beagle, leaving the three Fuegians to their fate.

After a foray to the Falkland Islands (*7*) – where FitzRoy supplied security for newly established British interests, and purchased a second boat – the expedition moved back up the east coast of South America.

While the *Beagle* and the new schooner (christened the *Adventure*) completed marine surveys, Darwin spent long periods exploring on land. As well as collecting specimens, he experienced gaucho culture during wild adventures on the Pampas.

ADVENTURE TIME

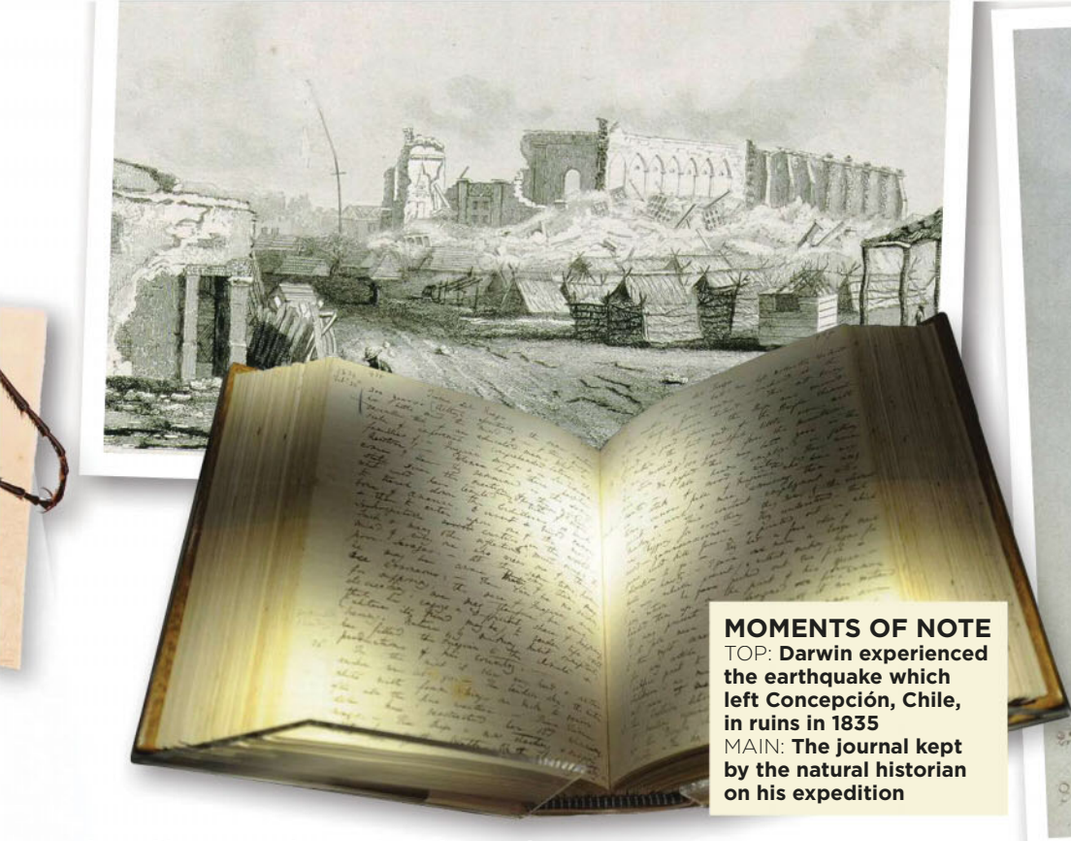
Beyond the discovery of giant bones belonging to extinct monsters like Mastodons and Megatheriums, these trips were highly eventful. During one extended excursion, Darwin travelled for a period with General Juan Manuel de Rosas – future dictator of Argentina.

This overland epic saw him complete a 200-mile horseback ride from Carmen de Patagones on the Rio Negro to Bahía Blanca, via the Rio Colorado. He then spent 12 days travelling 400 miles from Bahía Blanca to Buenos Aires, climbing the Sierra de la Ventana mountains en route, and subsequently riding along South America's second longest river, Rio Paraná, for a further 300 miles to Santa Fe.

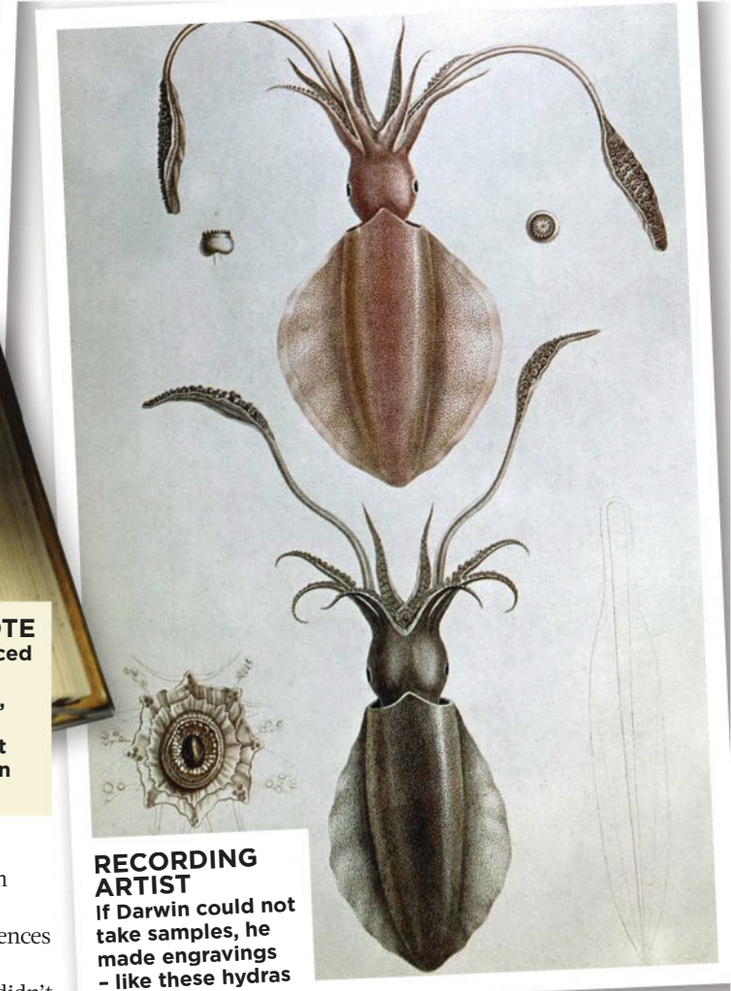
Attempting to return by riverboat down the Paraná, he arrived in Buenos Aires as a revolt was unfolding and became trapped, eventually escaping by boat to Montevideo, where he finally rejoined the *Beagle*.

Besides the evidence he was amassing about an entire strata of megafauna that had mysteriously disappeared, Darwin also found puzzling clues to another conundrum during his foraging forays, including teeth from a

ALAMY X3, ART ARCHIVE X1, GETTY X2, PA X1



MOMENTS OF NOTE
TOP: **Darwin experienced the earthquake which left Concepción, Chile, in ruins in 1835**
MAIN: **The journal kept by the natural historian on his expedition**



RECORDING ARTIST
If Darwin could not take samples, he made engravings – like these hydras

horse-like creature that pre-dated the arrival of Europeans to South America. These led him to question why species so similar to surviving animals could have disappeared.

As his collection grew, he took on a servant to help with the process of shooting and stuffing animals, and sending packages back to England. Occasionally, specimens found him. Darwin had been long been looking for a rare sub-species of rhea bird reported by the gauchos. In January 1834, while enjoying a meal shot by expedition artist Conrad Martens, the scientist suddenly realised he was eating the very elusive animal he'd been searching for.

After travelling back down the flank of Patagonia – via the Falkland Islands, where FitzRoy's men helped quash a revolt – the *Beagle* visited the mission in Tierra del Fuego. It was deserted. Jemmy Button remained nearby, but he'd shed his clothes, taken a wife and returned to a traditional way of life.

The expedition negotiated the Straits of Magellan in June 1834, entering the Pacific and turning north along the Chilean coast (*8*). In Valparaiso, Darwin ventured inland again, as far as Santiago and even Mendoza in Argentina, crossing the foothills of the Andes and making more observations about geological forces. On his return, he contracted a parasitic illness – possibly Chagas' disease – that would cause him lifelong problems.

While in Chile, Darwin witnessed the effects of a volcanic eruption on Osorno and an earthquake in Concepción, prompting him to postulate about plate tectonics and the possibility that South America was rising from the sea (another theory put forward by Lyell).

On 15 September 1835, the *Beagle* reached the Galápagos Islands (*9*), where Darwin would make his biggest discoveries – helped by a chance encounter. When the scientist met Nicolas Lawson, the acting Governor of Galápagos happened to mention that he could tell which island a tortoise was from according to the shape of its shell.

Darwin subsequently noted differences between mocking birds native to individual islands and, although he didn't label them at the time, collected finches from the archipelago that would become central to his theory of natural selection and evolution.

HOME TO MAKE HISTORY

Heading west across the Pacific, the *Beagle* visited Tahiti – where Darwin explored his theory about the formation of coral reefs by sinking volcanic islands – and New Zealand.

Though disappointed by the lack of mammalian life in New Zealand, Darwin was spellbound by the wonderfully weird marsupials of Australia (*10*). After arriving in Sydney in January 1836, he travelled inland to the Blue Mountains, and later explored Tasmania and King George Sound (current-day Albany in Western Australia), before the *Beagle* sailed for Cape Town, via the Cocos Islands (*11*) and Mauritius (*12*).

Using St Helena (*14*) and Ascension Island as stepping stones, FitzRoy took the expedition across the Atlantic and back to Brazil, to double check his previous readings. From here, the *Beagle* finally trotted home, via the Azores, to arrive in Falmouth on 2 October 1836 (*15*) – three years later than planned.

Darwin disembarked from the ship he would make famous, armed with ideas that would become the cornerstones of modern biology – even if it did take him two decades to make them public.

WHAT DO YOU THINK?
Which other adventurers radically changed the way we see the world?
Email: **editor@historyrevealed.com**

GET HOOKED

READ

The Voyage of the Beagle by James Taylor is a new account of the ship's survey, which puts FitzRoy in the centre of the action alongside Darwin.

This Thing of Darkness by accomplished comedy writer Harry Thompson follows the four Fuegians abducted by FitzRoy.

Originally called *The Journal and Remarks*, Darwin's own account – long-since renamed *The Voyage of the Beagle* – remains one of the bestselling travel books of all time.

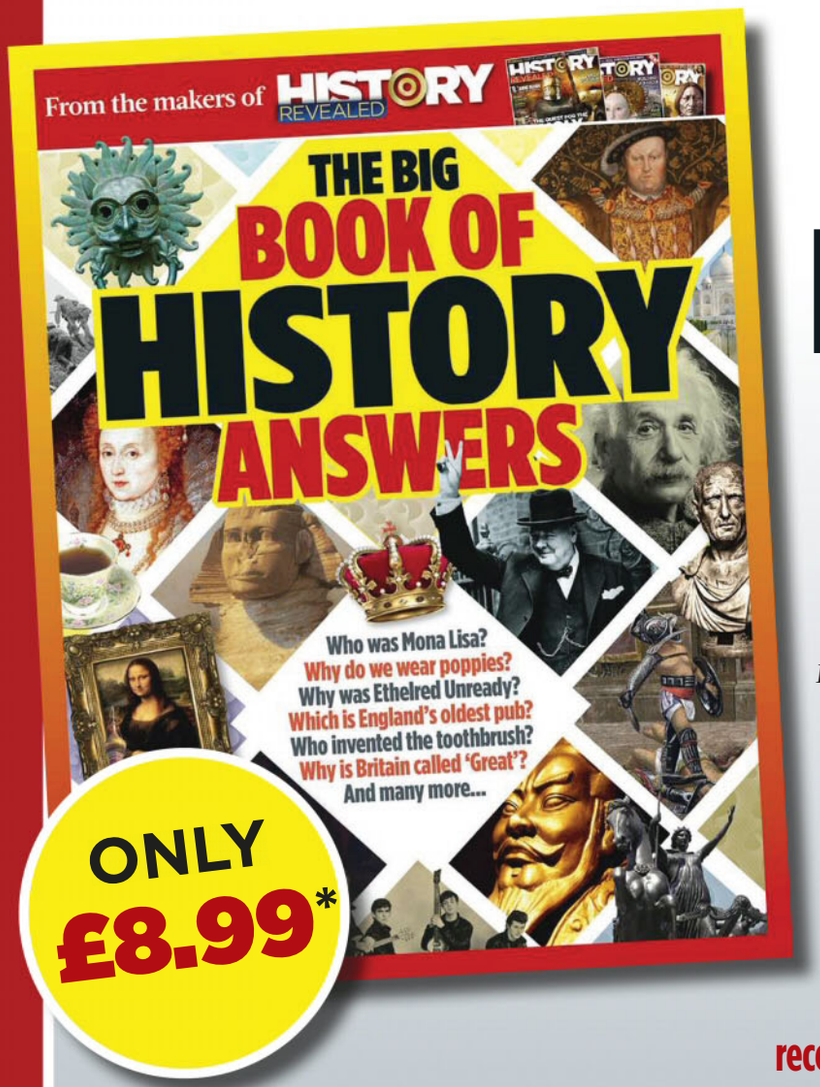
VISIT

From Ushuaia in Argentina, it's possible to take a small boat trip into the Beagle Channel to see Yahgan shell middens and encounter marine wildlife, including sea lions.

WHAT HAPPENED NEXT?

In 1839, Darwin conceived his theory of natural selection (that all species of life have evolved over time from common ancestors), but didn't make it public for nearly two decades, until another naturalist and explorer, Alfred Russel Wallace, independently came up with the same concept. The two men's ideas were released together in 1858 (without Wallace's prior approval), and Darwin published his ideas in full in *On the Origin of Species* the following year. The theory split opinions – particularly in the Church of England – but ultimately became a foundation stone of modern natural history.

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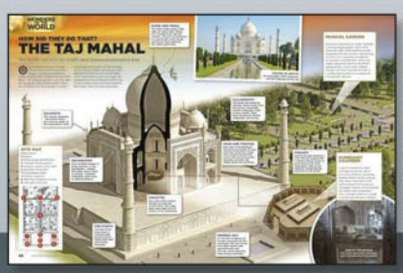
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GOLDEN KING
A 14th-century bust of Charlemagne – the divine ruler of medieval Europe – in Aachen Cathedral

CHARLEMAGNE
BRINGING LIGHT TO THE DARK AGES

A man of war, scholarship and deep faith, Charlemagne is the king who united western Europe in battle, and fused it for a millennium with religion and a thriving renaissance, writes **Jonny Wilkes**

ART ARCHIVE X1, ALAMY X1

Christmas Day in AD 800, and the powerful King of the Franks and Lombards, Charlemagne, is celebrating mass in Rome. Kneeling at the altar in the majestic setting of St Peter's Basilica, he is about to rise from his prayers when, seemingly unexpectedly, Pope Leo III approaches the monarch, places a crown on his head and proclaims him *Imperator Romanorum* – 'Emperor of the Romans'.

In many ways, the act shouldn't have been all that surprising. Charlemagne was the most powerful man in Europe, having spent three decades building a domain the likes of which had not been seen since the fall of the Western Roman Empire in the fifth century AD. He introduced sweeping reforms, centralised control, encouraged an intellectual renaissance and spread Christianity (although rarely peacefully). As a deeply pious man, he had proved himself a committed protector of papal authority and lands, and Leo owed his very life to Charlemagne's recent intervention and support. Yet, if the story is to be believed, the Frankish King had no idea what the Pope was intending, or how important it would be to his legacy.

That moment on Christmas Day – the coronation of Charlemagne (or Charles the Great) as the first Holy Roman Emperor – has since been described as one of the most seismic events in European history. It laid the foundations for the continent we know today and ensured that the legend of Charlemagne would never be forgotten.

The details of his early life, however, may never be known. It is thought he was born in the AD 740s, either in Liege or Aachen (present-day Belgium and Germany respectively), but these are estimations. Even Einhard, a respected scholar of Charlemagne's court, admits that: "It would be folly, I think, to write a word concerning Charles's birth and infancy, or even his boyhood, for nothing has been written on the subject, and there is no-one alive now who can give information on it." He was the son of Pippin III, who was Mayor of the Palace to the Merovingian Dynasty – the toothless rulers of the Franks. Although he was only an official, Pippin actually wielded far greater power and influence than the 'do-nothing' Merovingian kings (see Europe before Charlemagne, right), resulting, in AD 751, with him seizing the throne for himself. By the time of his death in AD 768, Pippin passed on a great kingdom to his sons, Carloman and Charlemagne.

> **"To have another language is to possess a second soul."**
> *Charlemagne*

For three years, the brothers ruled jointly but not-so harmoniously. Between an uprising and their own rivalry, outright war was often a very real threat. Rather conveniently, this was avoided as Carloman died suddenly in AD 771 (of natural causes, it was claimed) and Charlemagne became the sole ruler.

MILITARY CAMPAIGNING

With his own position more secure, the warrior-king Charlemagne set out to expand his Frankish territories, unite his people under his banner and spread Christianity. To these ends, he was in a near-constant state of military campaigning during his reign. He invaded lands on all sides simultaneously, displaying both a tactical brain for battle and a ruthlessness towards any enemies who defied him. Strongly built, tall, energetic and courageous, he was often found at the vanguard of his forces, wielding his legendary sword known as 'Joyeuse'.

The most brutal of his front lines was in the north, where he became embroiled in a bloody conflict with the Saxons for three decades, before they were finally brought into the fold. As the Saxons strongly opposed his forceful attempts to convert them, the fighting was fierce. Pillaging and mass killings were commonplace. The worst came in AD 782, when Charlemagne ordered the slaughter of around 4,500 Saxons, in what is now known as the Massacre of Verden, as a punishment for their ongoing rebellion against him. After the Saxons fell, it was declared that anyone who didn't get baptised into Christianity would be put to death.

His religious zeal also drove his campaigns in the south. Early on in his reign, he invaded northern Italy – as the Lombards were threatening the power of the Pope – and, by AD 774, he had declared himself their King.



CATCHY NAME
Though now called the first **Holy Roman Emperor**, the title Charlemagne used after his coronation was: "Charles, most serene Augustus, crowned by God, **great and pacific emperor, governing the Roman empire**."

SURPRISE, SURPRISE
In an ostensibly unexpected turn of events, Pope Leo III crowns Charlemagne Holy Roman Emperor, 25 December AD 800

ALAMY X1, BRIDGEMAN IMAGES X1, GETTY X2

With Islam growing as well as Christianity, Charlemagne was concerned with his south-western border, so ordered a foolhardy march into Spain. Despite disastrous defeats and an eventual retreat, he did manage to establish Frankish control over the Spanish March, near the Pyrenees. Along with the capture of Bavaria and his victories over the Avars, Charlemagne conquered the vast majority of Western Europe – creating the Carolingian Empire. And with at least 18 children born of his many wives and concubines, Charlemagne clearly intended his empire to last.

SETTING STANDARDS

Once Charlemagne had acquired new lands, he faced the issue of how they should be controlled. Although away on campaign for huge stretches of time, Charlemagne was always directly involved in the governing of his domain. This was thanks to his palatium – a group of trusted advisers and family members – who would follow him as an itinerant government, as well as by setting up courts in various cities to ensure he was never far from a seat of power. His grandest residence was at Aachen, the capital of his empire.

This style of governing may seem unstable and hard to manage, but Charlemagne's administration was an overwhelming success, especially considering that his domain included dozens of peoples, languages and cultures – many of which had been violently brought under his control. The reason he was able to bring law and order to Europe, which had seen centuries of fighting and division since the fall of the Romans, can be summed up with one word: standardisation.

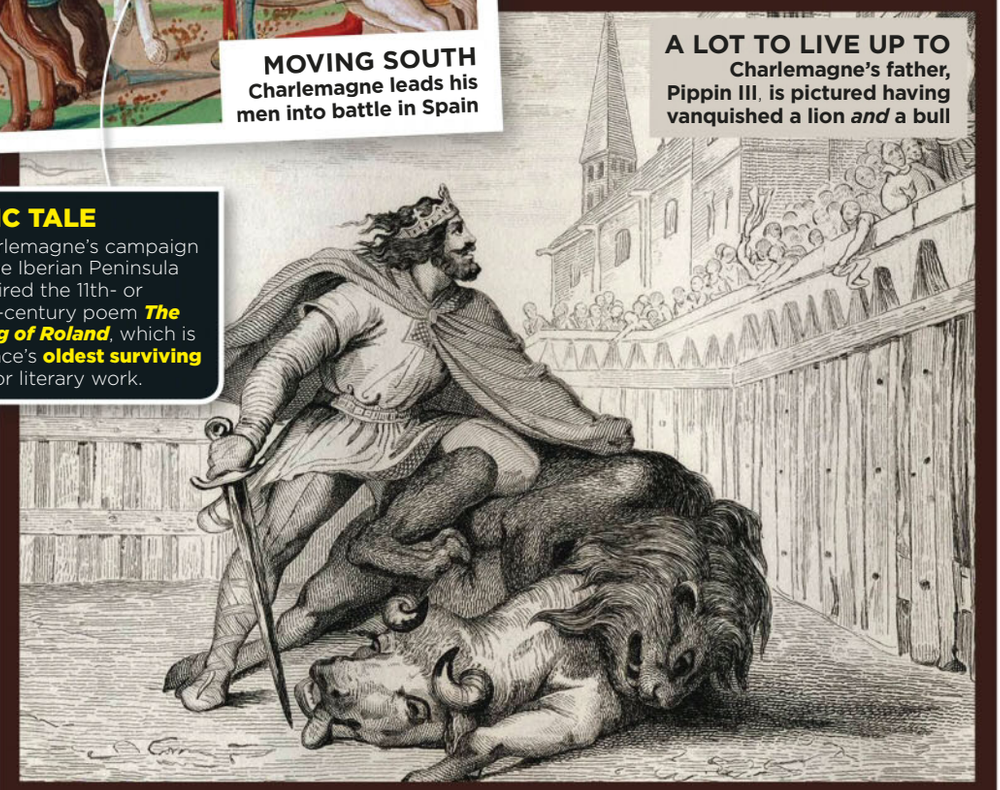
The most obvious example of this was in religion. As the devout Charlemagne spread Christianity – often using oppressive, even draconian methods – he became a central figure in the Church. As well as paying huge sums to the establishment, he was responsible for the appointment of bishops and abbots and was a key ally of the papacy – his regime was the muscle propping up the increasingly vulnerable Papal States. Rather than alienating or infuriating the clergy, however, his aggressive policies were welcomed, as Charlemagne was seen to be strengthening and centralising Church power. He was hailed, borderline worshipped, as the guardian of the faith.

Charlemagne knew that the growth of Christianity wasn't enough to ensure stability in his realm. So he took up one of his father's reforms and implemented it on a much larger scale: he made the bold step of abandoning the gold standard as the basis of the monetary system, and replaced it with a uniform silver currency. This helped to standardise weights

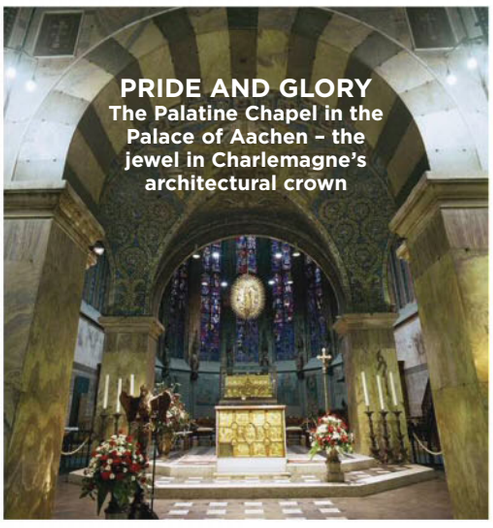


MOVING SOUTH
Charlemagne leads his men into battle in Spain

EPIC TALE
Charlemagne's campaign in the Iberian Peninsula inspired the 11th- or 12th-century poem ***The Song of Roland***, which is France's **oldest surviving** major literary work.



A LOT TO LIVE UP TO
Charlemagne's father, Pippin III, is pictured having vanquished a lion *and* a bull



PRIDE AND GLORY
The Palatine Chapel in the Palace of Aachen – the jewel in Charlemagne's architectural crown

TOP CHOICE

EUROPE BEFORE CHARLEMAGNE

Around the time of Charlemagne's birth in the mid-eighth century AD, Europe was in the midst of the Dark Ages. After the Roman Empire collapsed nearly 300 years earlier – the last Western Emperor, Romulus Augustus, had been deposed in AD 476 – the continent struggled to adapt to a world without the relative structure and society of the Romans. The laws, trade networks, bureaucracy and even the roads that the Romans had put in place were long lost. The land was broken up into a collection of independent and constantly fighting kingdoms, and Francia (made up of modern-day parts of Germany and France) was among the biggest and most powerful. It was ruled by the Merovingian Dynasty, but they were not effective leaders. They were dubbed *rois faineants*, or 'do-nothing kings', as the real power was behind the throne, in the hands of the Mayor of the Palace. Charlemagne's father, Pippin, served in that role until AD 751 when, with the blessing of the Pope, he ousted the last Merovingian King, Childeric III. An alliance was formed with the papacy, which saw the Pope officially recognise Pippin's authority in return for military assistance. When Charlemagne ascended the throne, he honoured this relationship.

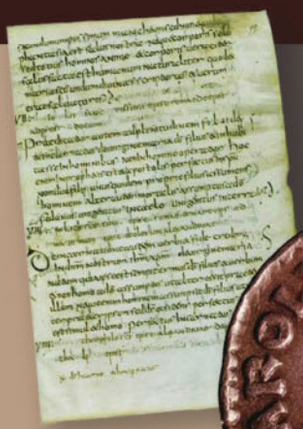
BREAK OPEN THE CHARLEMAGNE

SUCCESS STORY

Charlemagne's 46-year reign as King of the Franks, for 14 of which he also held the title of Emperor of the Romans, was dominated by military campaigns – but not all his victories came on the battlefield

LITERACY

Latin was the language used for the Bible and most official documents. As such, the clergy and administrators had to be able to read and speak it for Christianity to spread and the government to work efficiently. Schools of learning were created to improve literacy as was a new, simpler script, 'Carolingian Minuscule'.



'Carolingian Minuscule' in the scholar Alcuin of York's hand

CURRENCY

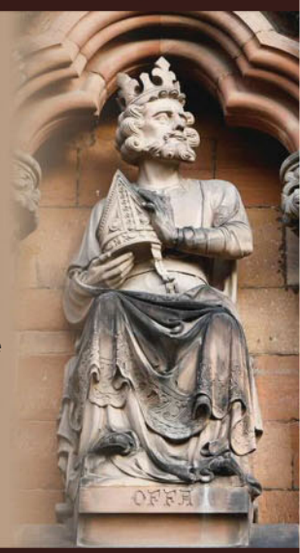
A gold shortage drove Charlemagne to implement a major economic reform – abolishing the system based on gold coins and replacing it with a new standard, the livre carolinienne, which used pounds of silver.



Charlemagne's profile adorns a ninth-century-AD silver coin

TRADE

Charlemagne ordered that all weights and measures should be equal and exact, which helped commerce to thrive across the Carolingian Empire and boosted trade with other countries, such as with King Offa of Mercia (pictured). Charlemagne was also interested in expanding into previously untapped trading possibilities, especially around the North and Baltic Seas.





Charlemagne's armies cross the Alps in AD 773

RELIGION

Charlemagne's main goal was to convert his newly conquered lands to Christianity. Though his methods could be violent, he did also reform the Church and improved the moral standard of the clergy. His literacy reforms meant liturgical practices were standardised, and more clergymen were trained in teaching the Bible.



MILITARY

It has been said that Charlemagne owed his successes in battle to the development of stirrups, which made his cavalry deadlier. However, the stirrup wasn't used until after most of his victories. In truth, he was a gifted strategist and relentless in his campaigns.



The Frankish King attends mass in an army camp

EMPIRE BUILDING

By his death in AD 814 (pictured), Charlemagne's empire was the biggest seen for some 400 years. It was the foundation for the Holy Roman Empire, which lasted until 1806, when it was dissolved following defeat by Napoleon Bonaparte.



ADMINISTRATION

Within his vast domain, Charlemagne relied on royal officials, known as counts, to govern local entities. They were responsible for raising taxes and troops and maintaining law and order. Special officials, the *missi dominici* (pictured), would travel the realm to inspect the administration and pass on royal orders. Every year, the King held an assembly of his officials at Aachen, where he personally heard reports from his empire and spoke of new policies.

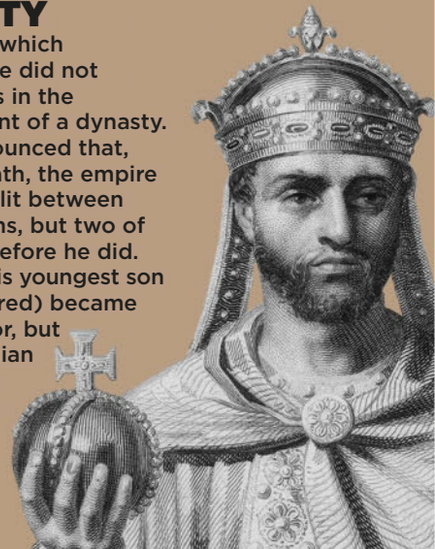
CULTURE

Charlemagne led a cultural and intellectual revival. Eminent clerics and scholars came to his court, and his libraries housed the classical works. The Palace of Aachen was the heart of this renaissance, with the greatest works of art and architecture, including the Palatine Chapel (pictured), which still enthrals visitors today.



DYNASTY

One area in which Charlemagne did not succeed was in the establishment of a dynasty. He had announced that, after his death, the empire would be split between his three sons, but two of them died before he did. Therefore, his youngest son Louis (pictured) became sole Emperor, but the Carolingian Dynasty fell apart within a century.





SCAREDY-SCHOLAR
While Alcuin of York clearly **respected Charlemagne** and enjoyed his company, the scholar's letters hint that he was also quite **fearful of the Emperor**.



HIGH CULTURE
ABOVE: **Leading scholar of the day, Alcuin of York (left), meets Charlemagne**
RIGHT: **A keen advocate of literacy, the Holy Roman Emperor visits a school**

and measures used in trade, which went a long way to improving commerce around Europe and bringing in wealth.

He standardised the law across his realm with administrative and legal reforms, while aiming to ease communication by encouraging the teaching of Latin, ensuring a standardised language. What's more, a new style of writing was created during his reign. 'Carolingian Minuscule', compared to other scripts of the day, was easier to follow and learn, so was instrumental in improving literacy. Through standardisation, Charlemagne brought a divided Europe together under common law, universal communication and thriving trade. Those who didn't obey were dealt with harshly.

RENAISSANCE MAN

Although it is thought he had little education himself – he was unable to read and write until late in life – Charlemagne placed great significance on education. He was not only concerned about the acquisition of knowledge, but also its preservation. To that end, he built and patronised schools, libraries and scriptoria, where manuscripts could be created and copied, and encouraged a cultural, scholarly and intellectual awakening that had been missing in Europe during the Dark Ages. Some 7,000 manuscripts still survive from eighth- and ninth-century Europe alone. In what is now referred to as the Carolingian Renaissance, the explosion in cultural activity did not just manifest itself through writing, however, but in art, architecture and music. Charlemagne invited the great minds from Italy, Spain, England and Ireland to his empire, the most notable of whom was the Anglo-Saxon scholar Alcuin of York. On seeing the intellectual achievements of Charlemagne's court, Alcuin claimed that a "New Athens" was being formed at Aachen.

"Right action is better than knowledge, but in order to do what is right, we must know what is right."
Charlemagne

As he grew older, Charlemagne became less involved in military campaigns – which were against new threats to the empire such as the Vikings – but he was no less dedicated to his reforms. In AD 813, as if aware he didn't have much time left, he crowned one of his sons, Louis the Pious, as co-Emperor, in the expectation that his empire would continue to flourish. The following year, he fell ill after catching a fever while bathing in Aachen's warm springs. He died a week later in bed, supposedly upset that he was going to die with his work on Earth unfinished.

Whether as King of the Franks or as the Emperor of the Romans, Charlemagne was the most powerful man in Europe. His coronation at the dawn of the new century actually changed little in terms of how much power the ageing ruler wielded, but it was a massively symbolic move. It challenged the authority of the Byzantine Empire, based in Constantinople (and built from the last remnants of the Eastern Roman Empire), and gave further legitimacy to his spiritual role as the protector of Christendom. Most importantly, that Christmas Day in AD 800 was day one of the Holy Roman Empire (although it wasn't called that until the 13th century), which lasted over 1,000 years. As such, it has often been argued that the crowning of Charlemagne was the foundation for modern-day Europe. Despite Charlemagne's efforts, however, his own Carolingian Dynasty was not to last. In less than a century, its power was all but gone, as none of his successors could match his ambition and leadership. After all, as the world around him was stagnating in the Dark Ages, Charlemagne had dragged it (kicking and screaming at times) into the light – it was a tough act to follow.

EINHARD, FRANKISH SCHOLAR AT THE TIME OF CHARLEMAGNE
"He also tried to write, and used to keep tablets and blanks in bed under his pillow, that at leisure hours he might accustom his hand to form the letters"

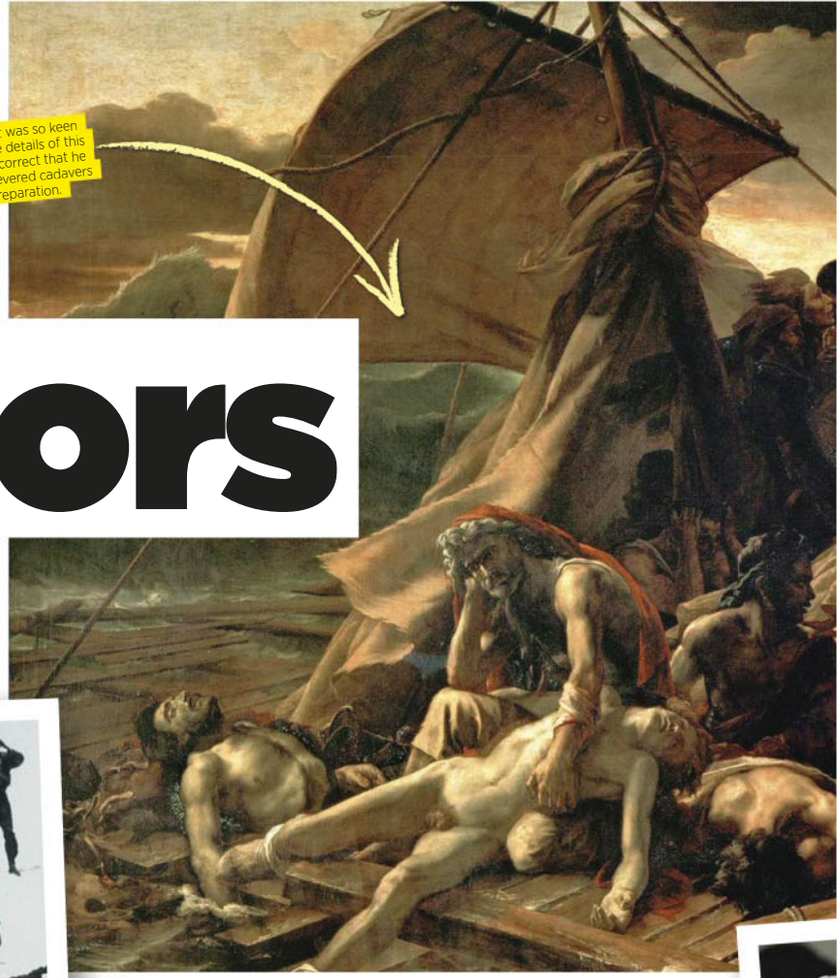


WHAT DO YOU THINK?
Charlemagne is sometimes called the 'Father of Europe', but was he a good leader or nothing more than a tyrant?
Email: **editor@historyrevealed.com**

ALAMY X7, GETTY X4, MARY EVANS X1

Born survivors

Meet the hardy souls who have survived shipwrecks, plane crashes and cave-ins – **Gavin Mortimer** makes the introductions...



Géricault was so keen to get the details of this painting correct that he studied severed cadavers in preparation.



The 1972 wreckage of the Uruguayan Air Force Flight 571



Chilean miner Juan Illanes reaches the surface

MINER MIRACLE

They were known as the 'Los 33' and, for 69 days in the summer of 2010, their fate gripped the world. The 33 Chilean miners became trapped 700 metres underground after a cave-in at a copper-gold mine. An international rescue effort began and, on 13 October, the men were all winched to safety in front of a live global TV audience estimated in excess of 1 billion.



ANDES ORDEAL

Dramatised in both print and film, the story of the Uruguayan airplane that crashed in the Andes in 1972 continues to enthral. Several passengers were killed in the crash, and more died in an avalanche, but sixteen survived, mostly rugby players who'd been on their way to a match in Chile. They were forced to eat flesh from the dead and endured sub-zero temperatures before being rescued, after 72 days of freezing hell.

SLAVES TO MISFORTUNE

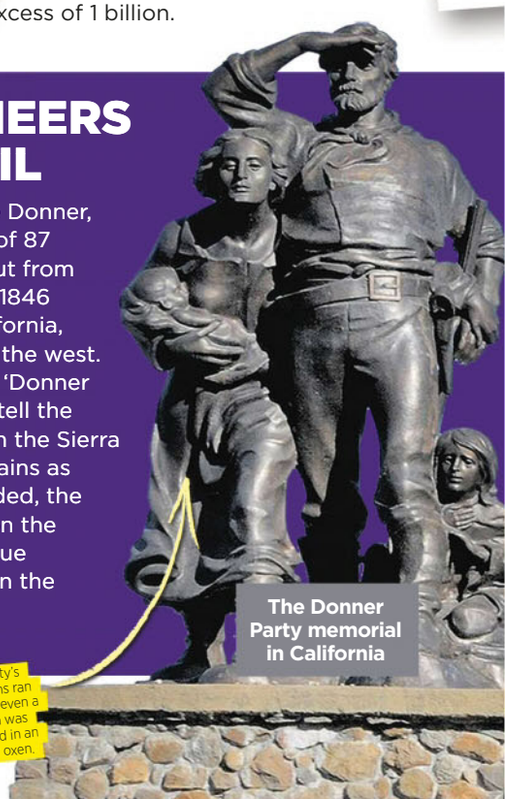
After the US merchant ship *Commerce* ran aground off Morocco in 1815, the crew was attacked by tribesmen. One sailor was killed, the other ten took to their longboat to row 200 miles down the coast, only to be captured by Bedouins. Enslaved, their ordeal ended only after a march of several hundred miles through the Sahara, where they were sold at a British trading post.



The ill-fated crew of the *Commerce* were dragged across the vast Sahara

PIONEERS IN PERIL

Led by George Donner, a wagon train of 87 pioneers set out from Illinois in April 1846 bound for California, 2,500 miles to the west. Only 46 of the 'Donner Party' lived to tell the tale. Trapped in the Sierra Nevada Mountains as winter descended, the survivors fed on the dead until rescue finally arrived in the spring of 1847.



The Donner Party memorial in California

During the party's isolation, tensions ran high – there was even a murder. A man was mortally stabbed in an argument over oxen.

ALAMY X2, GETTY X3, MARY EVANS X1, PA X2, TOPFOTO X1, REX X1, ISTOCK X2



'The Raft of the Medusa', painted by Théodore Géricault in the three years after the tragedy

ART OF SURVIVAL

When, in 1816, the French frigate *Medusa* was wrecked off the African coast, 150 of the crew improvised a raft to survive. But only 15 came through the next 13 days. Upon their rescue they told of murder and cannibalism. The tale shocked Europe but inspired the painter, Théodore Géricault. His masterpiece, 'The Raft of the Medusa', still hangs in the Louvre.



L-R: **Koepcke arrives in Frankfurt the year after her close call with death; the dense canopy of the Peruvian Amazon rainforest**

When a wound in Juliane's arm became infected and filled with maggots, she used gasoline (found in an abandoned hut) to disinfect the cut, before pulling out the 30 or so maggots.

PLANE INCREDIBLE

The survival of 17-year-old German Juliane Koepcke in December 1971 is nothing short of amazing. When the passenger jet in which she was travelling broke up during a storm, she fell 10,000 feet into the Peruvian rainforest. Suffering only a broken collarbone and deep cuts, the teen trekked ten days through the jungle to safety. Juliane had been travelling with her mother who, the girl later learnt, had survived the fall but was trapped by her injuries; she died within a few days.

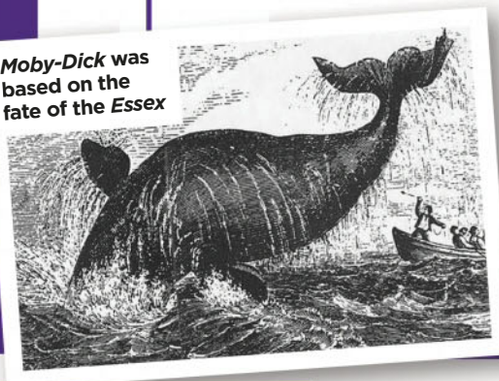


Alvarenga hugs his parents upon his return home

OCEAN ODYSSEY

In January 2014, a small boat washed up on the Marshall Islands, with 36-year-old Jose Alvarenga from El Salvador inside. A year and one month earlier, he'd set off on a fishing trip with a friend – from Mexico, 5,500 miles across the Pacific. Four months after a storm blew them off course, his pal died. Alvarenga survived on raw fish and rainwater.

"THAR SHE BLOWS"



Moby-Dick* was based on the fate of the *Essex

Herman Melville's novel *Moby-Dick* was inspired by a real whaleship: the *Essex*. While hunting in the South Pacific in 1820, the vessel was rammed by one of its prey. The 20 crew members scrambled into three longboats. Eight survived the 95 days adrift, but only because they'd drawn lots to see who to sacrifice for food.

ICY ISOLATION

An Australian explorer and scientist, Douglas Mawson (pictured) and two friends set off to explore the eastern coast of Antarctica in November 1912. A month later one of the men vanished down a crevasse, taking with him their tent and most of the food. The second explorer died of starvation in January but Mawson, despite suffering frostbite, hunger, and exhaustion, reached base camp in February 1913.





Before disaster strikes, Mawson's crew prepares to cross a snow bridge over a deadly crevasse

OUT OF THE OUTBACK

Described as a "walking skeleton" when he emerged from the Australian Outback in April 2006, 35-year-old Ricky McGee had survived 71 days, though he'd lost 9st 4lbs in weight. His ordeal began when his car broke down and, after ten days walking aimlessly around the Northern Territory, he found an abandoned dam. He ate leeches, frogs and baby snakes until he was rescued.



Ricky McGee nearly starved in the Australian bush

WHAT DO YOU THINK?

Which other astounding stories of human survival could we have included in this Top 10?

Email: editor@historyrevealed.com



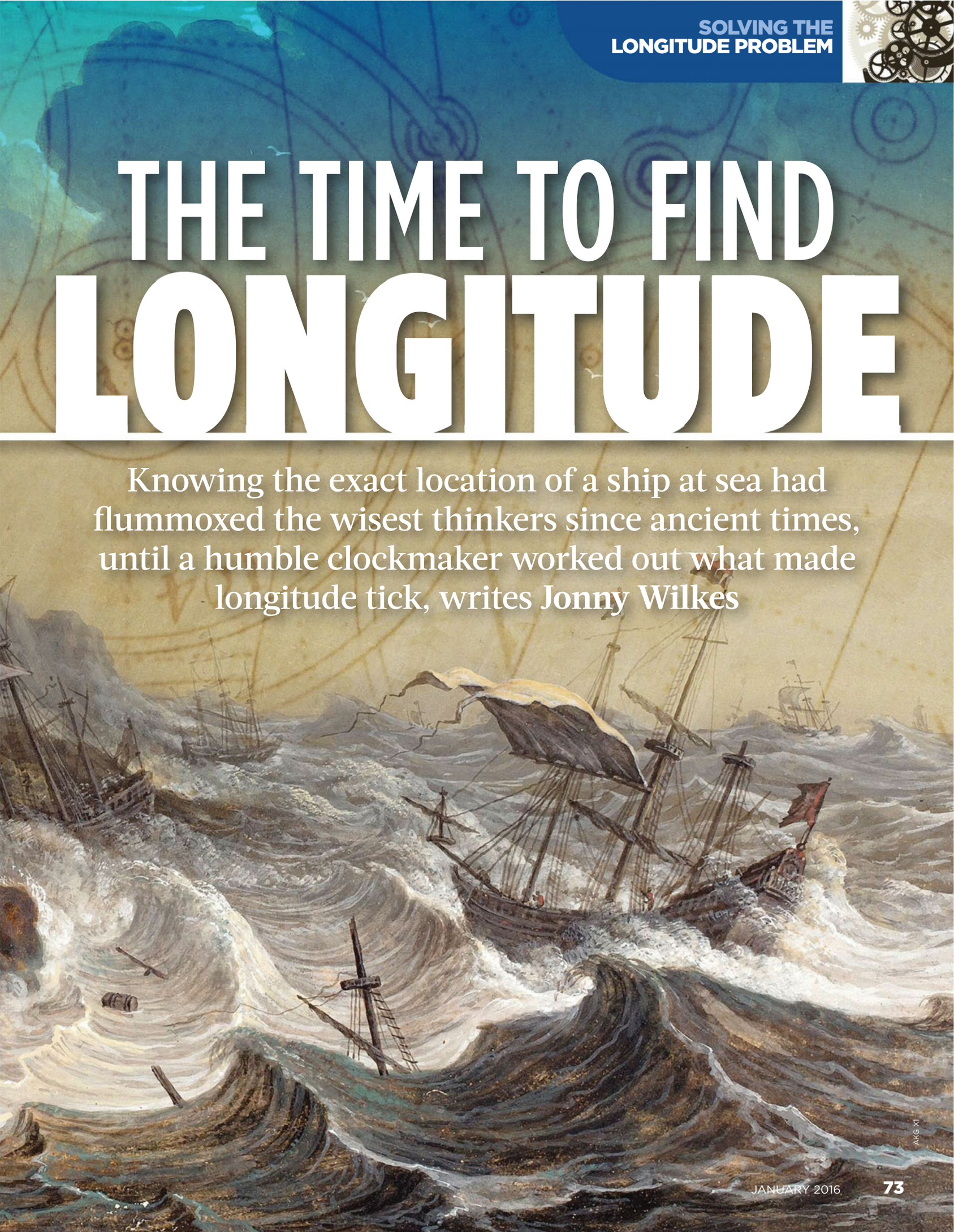
DEAD RECKONING

Before the 18th century, the most common practice for establishing a ship's longitude was 'dead reckoning', a **crude calculation of the distance moved from a fixed point** using a ship's speed and the time taken. "Too often" historian Dava Sobel says, "the technique of dead reckoning marked him for a dead man."

DASHED ON THE ROCKS
Without a reliable form of navigation, ship wrecks – as depicted in Johann Christoph Dietzsch's 18th-century painting – were common tragedies

THE TIME TO FIND LONGITUDE

Knowing the exact location of a ship at sea had flummoxed the wisest thinkers since ancient times, until a humble clockmaker worked out what made longitude tick, writes **Jonny Wilkes**



AKG X1

High winds and squalls had raged for almost the entire October 1707 voyage of Admiral Sir Cloudesley Shovell's fleet, and morale was floundering. Following an unsuccessful campaign against French and Spanish forces at Toulon, the 21 ships had been ordered to withdraw and return to England, but rough conditions on the Atlantic – which Shovell described as "dirty weather" – severely hampered the crossing and blew them off course. It was with relief that they approached the end of their gruelling journey, with ship navigators, and Shovell himself, calculating the fleet's position at somewhere near the coast of Brittany. But they were fatally wrong.

The ships were actually many miles to the west, and perilously close to the shallow waters of the Isles of Scilly, but by the time the error was realised, it was already too late. On the stormy night of 22 October, the flagship, HMS *Association*, struck the rocks first and sank in a matter of minutes, taking all of the 800 crew with her, before three more vessels were splintered and lost as crews couldn't react quickly enough. In all, between 1,400 and 2,000 seamen perished in the disaster (one of the British navy's worst) – all down to the age-old problem of navigating at sea. With the oceans busier than ever at the start of the 18th century, and wrecks all too common, it was finally time to solve the seemingly impossible problem of finding a ship's longitude.

THE LONGITUDE ACT

Whereas a ship's north-south location (latitude) was relatively easy to find for any skilled sailor (by charting the height of the Sun or the positions of the stars), establishing where a vessel was on the east-west axis (longitude) proved far more complicated. Historian Dava Sobel elegantly explains the key difference between the two in her bestselling book, *Longitude* (1995): "The zero-degree parallel of latitude is fixed by the laws of nature, while the zero-degree meridian of longitude shifts like the sands of time. This difference makes finding latitude child's play, and turns the determination of longitude, especially at sea, into an adult dilemma – one that stumped the wisest minds of the world for the better part of human history."

Finding longitude required knowing both the time aboard ship and the time at a known reference point, such as the home port, so that the difference in hours can be converted into distance. As the Earth rotates every 24 hours, an hour in difference equals 15 degrees in longitude. Today, this can be achieved by simply looking at a clock or watch (or, better still, using GPS), but that has only recently become possible. Even after clocks were invented, they were not that accurate on land, let alone at sea, where the rolling of a ship, temperature changes and the small variations in

"Unable to find longitude reliably, ships were at risk of getting lost or being wrecked every time they left port."



40
The number of years John Harrison spent working on his five marine clocks

This c1600 engraving by Philip Galle shows how navigators tried, with little success, to find longitude using the movement of the Sun

BRIDGEMAN IMAGES X3, NATIONAL MARITIME MUSEUM, GREENWICH, LONDON X1

gravity at different latitudes, played havoc with the running of a timekeeper. Unable to find longitude reliably, ships were at risk of getting lost or being wrecked every time they left port.

By the dawn of the 18th century, the implications of this were growing more serious, due to the rapid development of naval trade. As stated by Richard Dunn and Rebekah Higgitt in *Finding Longitude* (2014): "For many seafarers, the main concern was not simply a matter of getting from place to place... Rather, it was whether this could be done more predictably, more quickly and with less risk; in other words, could it be done more profitably?" So in 1714, seven years after the British learned in horror of the fate of Shovell's fleet, the Longitude Act was passed. It offered a prize of £20,000 (over £1.5 million today) to anyone who could devise a "practicable and useful" solution to finding longitude within half a degree. The prize would be awarded by a group of commissioners, the Board of Longitude. They could also reward proposals with £10,000 or £15,000, depending on their accuracy, and subsidise ideas they felt had potential.

CELESTIAL CLOCK

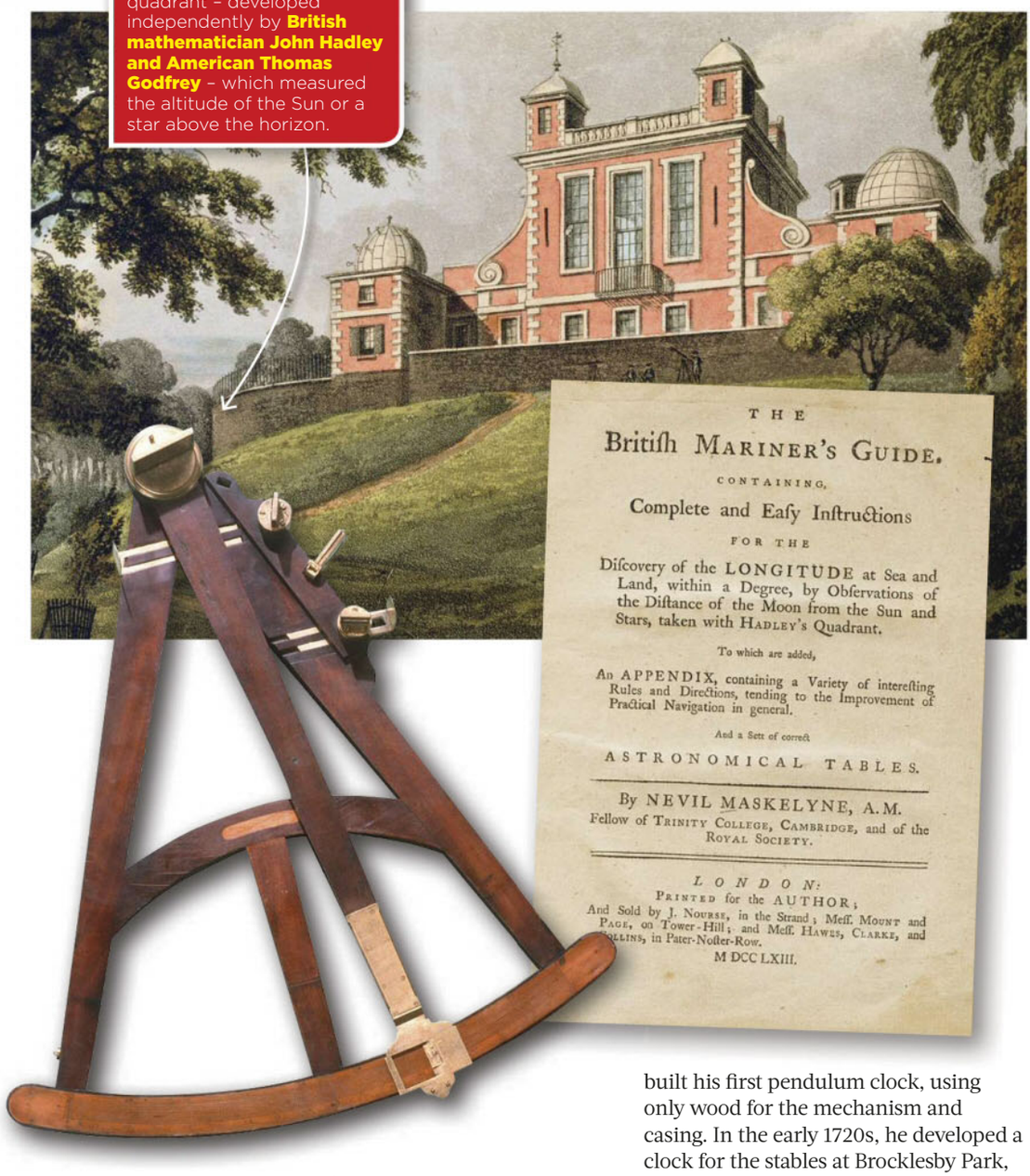
There was no shortage of ideas before the Longitude Act, but once word of the prize money had got out, the members of the Board were swamped by, it seemed, every professional and amateur scientist, mathematician and inventor. Many believed the answer would come from astronomers, who had long argued the night sky would act as a celestial clock for the purposes of longitude. Yet astronomer's ideas were riddled with problems, the most obvious being that they were rendered useless during the day or in cloudy weather. The actions of eclipses or, as put forward by the great Galileo, the moons of Jupiter were so predictable they could be used, except the former were too irregular and it was extremely difficult to observe the latter from the deck of a moving ship.

The first Astronomer Royal, John Flamsteed, was instead an advocate of the 'lunar distance method'. By tracking the Moon relative to the stars, it would be possible to compare the results to a comprehensive table of its predicted movements, allowing a navigator to work out the time at the Royal Observatory in Greenwich. This was viable except for the giant flaw that no such table existed and it would be a herculean task to create one.

Astronomy remained the leading field expected to discover the secrets behind longitude (partly as the Astronomer Royal was a member of the Board) and yet nothing particularly decisive was produced. Years passed without much result, which only exacerbated the growing feeling that not only was the whole enterprise doomed, but those involved must be mad. "Someone who searched for a longitude method," claims Simon Schaffer, Professor of History of Science at the University of Cambridge, "was someone who was searching for the impossible."

THE QUADRANT

Another innovation was the quadrant – developed independently by **British mathematician John Hadley and American Thomas Godfrey** – which measured the altitude of the Sun or a star above the horizon.



INNOVATIONS
TOP: **The Royal Observatory was founded in 1675 with the aim of solving longitude**
LEFT: **John Hadley's quadrant, forerunner of the sextant – a vital tool in navigation**
RIGHT: **Nevil Maskelyne's 1763 British Mariner's Guide, which was used by the lunar distance method**

GENIUS CLOCKMAKER

Searching for the impossible is exactly what John Harrison dedicated his life to doing. Despite having no training, and teaching himself everything from scratch, the Yorkshire-born carpenter was a brilliant clockmaker without equal. Before he was 20-years-old, he built his first pendulum clock, using only wood for the mechanism and casing. In the early 1720s, he developed a clock for the stables at Brocklesby Park, which required no lubrication as the wood used produced its own. This was revolutionary stuff, as it was the oil that so regularly caused faults with a clock's running, especially at sea. That clock has been running continuously, with one short stoppage, ever since. While clocks at the time would lose or gain seconds, if not minutes, every day, Harrison would develop clocks that kept within one second per month. If there was any man able to defy Isaac Newton's warning of 1721 that "When longitude at sea is once lost, it cannot be found again by any watch," it was Harrison.

From 1730 to 1770, Harrison worked tirelessly – to the detriment of his health, family relationships and gainful employment – on building three marine clocks and two watches. All are works of art in their way, but his masterpiece is unquestionably H4. Harrison had

dismissed H1 as flawed and rejected H2 and H3 before testing (despite the latter taking up 19 years of his life) but even he couldn't fail to recognise H4 as his masterpiece. Along the way, he had developed some major innovations in clockmaking, such as the bi-metallic strip, which was made from both brass and steel to counteract the effects hot and cold had on a clock's ticking.

On the completion of the oversized pocket watch in 1759, the ageing clockmaker admitted, "I think I may make bold to say that there is neither any other mechanical or mathematical thing in the world that is more beautiful and curious in texture than this, my watch... I heartily thank Almighty God that I have lived so long, as in some measure to complete it." People thought he was mad for thinking he could make a timekeeper as small as a watch accurate enough to find longitude. Indeed, Sobel makes the case that "In an earlier era, Harrison might have been accused of witchcraft for proposing such a magic-box solution."

It was no fluke, however, as on its first trial voyage to Jamaica in 1761, the watch excelled under the supervision of Harrison's son, William (at 68, Harrison was not fit for the journey). It drifted a mere five seconds after 81 days at sea. With a diameter of 13cm, H4 was tiny compared to his cumbersome clocks, but it was a giant of artisanal elegance and technical genius.

5,400
The number of parts that made up Harrison's H1, including every individual section of the chains

RIVAL METHODS

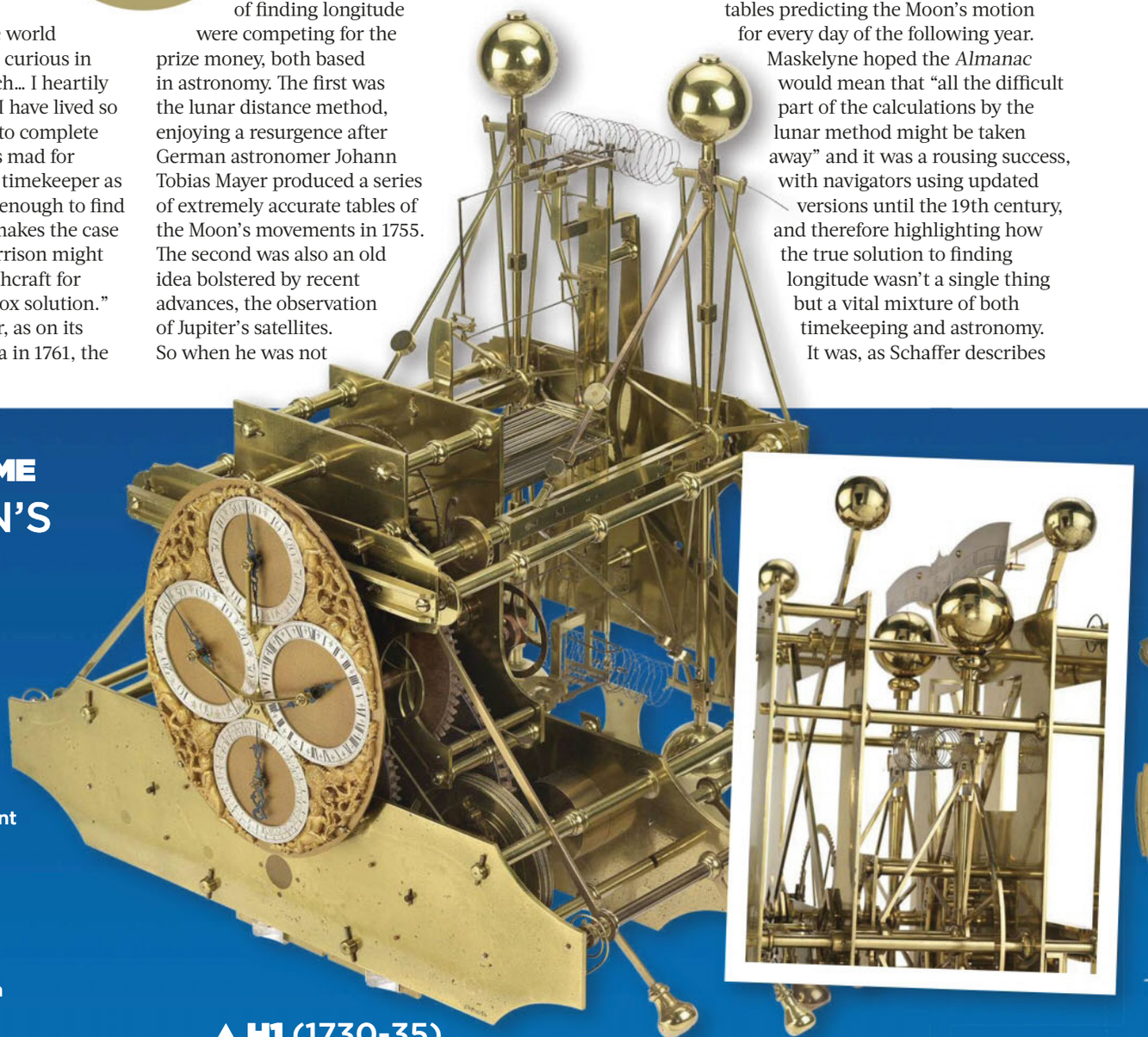
Somewhat ironically, however, Harrison's timing in finishing H4 was off. As the watch was being considered by the Board in the early 1760s, two other methods of finding longitude were competing for the prize money, both based in astronomy. The first was the lunar distance method, enjoying a resurgence after German astronomer Johann Tobias Mayer produced a series of extremely accurate tables of the Moon's movements in 1755. The second was also an old idea bolstered by recent advances, the observation of Jupiter's satellites. So when he was not awarded the £20,000 for H4, Harrison suspected the Board to be stalling to benefit astronomical methods over mechanical, a feeling that only worsened in 1765 when his loathed rival Nevil Maskelyne was named Astronomer Royal, and so was made a Commissioner on the Board. That, incidentally, was at the same time that H4 was refused the full prize money once again, following another highly successful trial in Barbados, where the watch was proven to find longitude within ten miles – three times more accurate than stipulated by the Act.

Two years later, Maskelyne published the *Nautical Almanac*, a collection of tables predicting the Moon's motion for every day of the following year. Maskelyne hoped the *Almanac* would mean that "all the difficult part of the calculations by the lunar method might be taken away" and it was a rousing success, with navigators using updated versions until the 19th century, and therefore highlighting how the true solution to finding longitude wasn't a single thing but a vital mixture of both timekeeping and astronomy. It was, as Schaffer describes

NATIONAL MARITIME MUSEUM, GREENWICH, LONDON X5; GETTY X1; BRIDGEMAN IMAGES X1

IT'S ABOUT TIME
HARRISON'S CLOCKS

In 1730, John Harrison arrived in London to discuss his plans for a clock capable of finding longitude with the Astronomer Royal (and member of the Board of Longitude), Edmond Halley, who sent him to meet esteemed watchmaker, George Graham. By the end of the day, Harrison was returning to his home in Lincolnshire with a hefty loan from Graham to build the clock he hoped would win him the longitude prize...

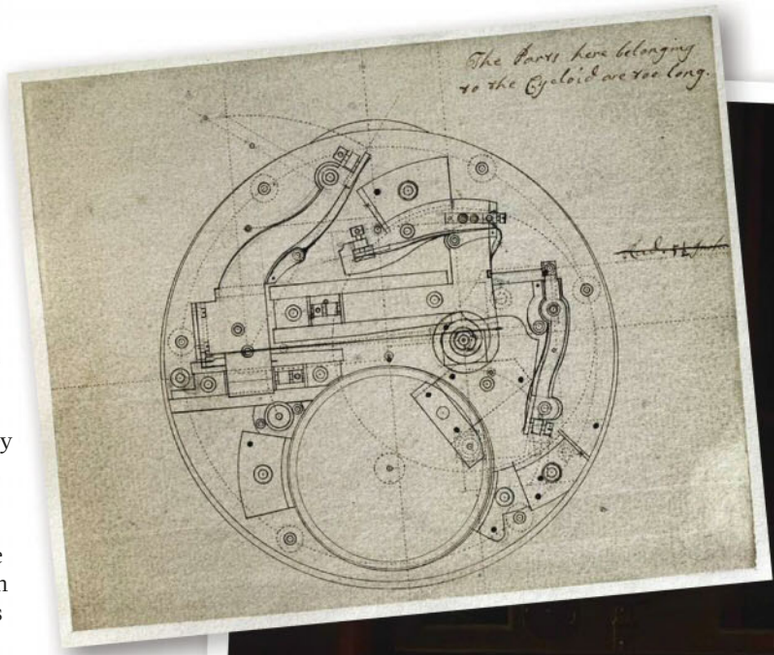


▲ H1 (1730-35)
Weighing over 30 kilograms, the brass clock didn't have a pendulum but a series of springs so it could be tossed and turned without losing time. On its 1736 trial to Lisbon and back, Harrison – who suffered miserably from seasickness – managed to correct the ship's course after identifying a headland as the Lizard, rather than the Start as the officers thought.

▲ H2 (1735-37)
Believing he could improve on H1, Harrison didn't ask for further trials but for the funds (£500) necessary to build a second clock. Before he even presented it to the Board in 1741, however, he had abandoned the project.

it, "undoubtedly the dominant officially sanctioned model of solving the problem of longitude at sea." While the Almanac was being produced, Maskelyne had carried out personal tests on H4, ordered after the Barbados trial, and they came back as a failure, in rather suspicious circumstances.

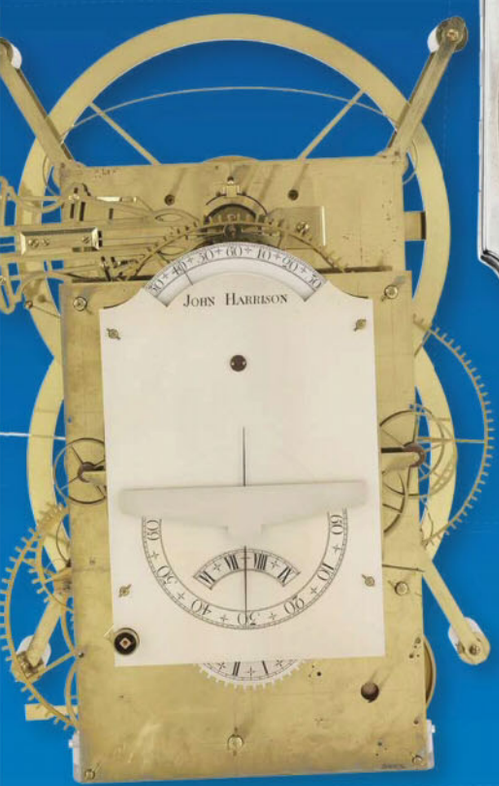
That said, Maskelyne and the Board are often depicted as the villains of the longitude story, yet Dunn asserts that their decisions against Harrison's clocks were in keeping with the Longitude Act. "Despite Harrison's accusations, the Commissioners do not seem to have expended more energy on promoting astronomical rather than timekeeper methods," he claims. "They spent large amounts of time and money on making, simplifying and trialling timekeepers. If they were not yet doing more to facilitate their use on board ships, that was because they were still very rare and expensive items." The question



GENIUS AT WORK
John Harrison (painted by Thomas King in 1767) made intricate drawings of his clock and watch mechanisms – details of H4 can be seen above

"H4 was tiny compared to his clocks, but it was a giant of artisanal elegance and technical genius."

▼ H3 (1740-59)
Harrison spent 19 years working tirelessly on H3, but it still couldn't meet his exacting standards. He had set his sights on building a watch instead.





▲ H4 (1755-59)
The pocket watch H4 was a revelation, weighing less than 1.5kg and a fraction of the size of his previous efforts. The watch features diamonds and rubies, but not as mere decoration. They are used to cut down on friction of the spinning wheels.

H5 (1760s-70)
Despite approaching 80, and suffering from worsening eyesight and gout, Harrison completed H5 (not pictured) with all the internal complexity of his masterpiece.

LONGITUDE LUNATIC
In his 1735 series, *The Rake's Progress*, William Hogarth shows the **inmates of Bedlam, London's insane asylum, working on the longitude problem**. One holds a telescope while another draws a globe with the lines of longitude on the wall.



The long quest to find longitude was widely mocked as the work of the insane

23,065
The amount, in pounds, John Harrison received for his entire work – more than any other person.

CRAZY SCIENCE

THE LONG WAY TO LONGITUDE

Even before the Board of Longitude was established in 1714, hundreds of people were suggesting ways to find longitude at sea, but not all of them were as promising as Harrison's clocks. Perhaps the most eccentric was the 'wounded dog theory', proposed in an anonymous pamphlet from 1687. The idea was to have a dog on every ship, bearing a non-life-threatening wound, but leaving one of its bandages on land. Then at noon each day, the bandage is placed in a solution of 'powder of sympathy', a magical healing substance, which would cause the dog to yelp – no matter how far away the ship was – and so the crew would know the time at their home port.

Another hare-brained method came from the mathematician (and colleague of Isaac Newton), William Whiston and his friend Humphrey Ditton. Ships would be stationed at fixed locations across the oceans and fire flares at set times every day. Nearby ships would then be able to determine their distance from the signal ship, based on the delay between seeing the flare and hearing the cannon. How these ships would be suitably anchored in deep water or manned, however, was not adequately considered.

is whether Harrison did enough just by making a single timekeeper or – as the Board argued – did he have to make more to prove their utility? If it was the latter, it could be argued the Board was right to withhold money. Following Barbados, Harrison had actually been offered £10,000 if he demonstrated his watch to a group selected by commissioners, as well as another £10,000 (minus expenses already paid) if he built two facsimiles. Reluctantly, Harrison, now in his seventies, started work on a second watch, H5 – but without the decorative flourishes of H4. As Sobel put it, "H5 is the work of a sadder but wiser man, compelled to do what he had once done willingly, even joyfully." At the same time, clockmaker Larcum Kendall built the second copy, K1.

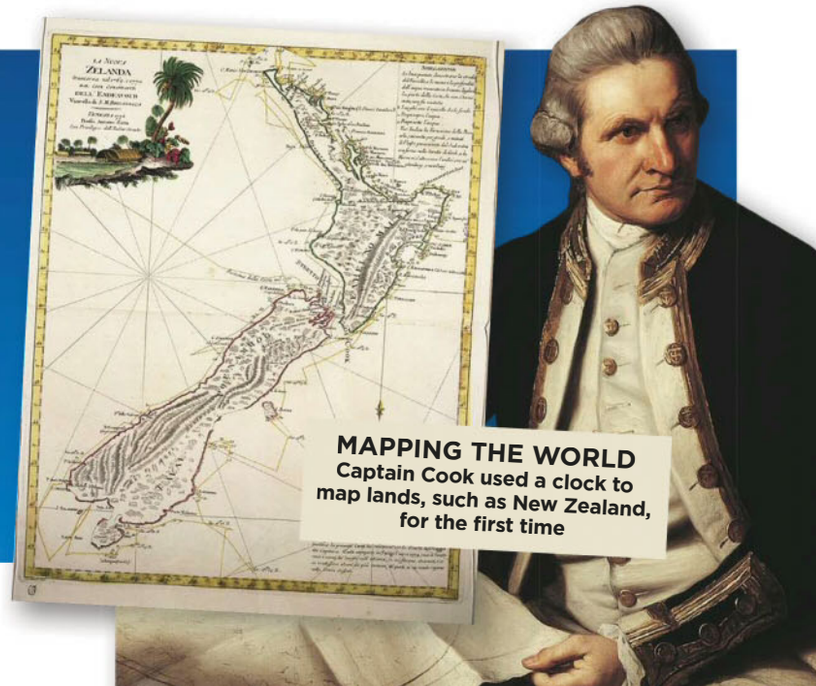
By 1772, the 79-year-old Harrison was tired of jumping through hoops, fearing he would not live to see his work vindicated, so he appealed to the one man he hoped could sway the Board, George III. It worked and William was invited for an interview at Windsor Castle, where the King allegedly remarked, "These people have been cruelly treated... By God, Harrison, I will see you righted!" He was as good as his word, performing trials on H5 personally over ten weeks, during which the watch kept accurate to within one-third of a second per day. The King then assisted the Harrisons in petitioning Parliament until June 1773, when Harrison was awarded £8,750. Still not the total promised by the Act, but the clockmaker finally had official recognition as the man who solved one of the great scientific puzzles of the age – how to find longitude at sea – and so saved countless lives.

AFTER HARRISON

COOK AND HIS CLOCK

When John Harrison died on 24 March 1776, his 83rd birthday, his legacy and that of the Board was already being felt around the world. Captain Cook had taken K1, based on Harrison's H4, on his second voyage and fell in love with it, referring to the watch as "our faithful guide through all the vicissitudes of climates".

Building marine chronometers became a boom industry, with men like John Arnold and Thomas Earnshaw mass-producing cheap watches for widespread use. In her book *Longitude*, Sobel goes as far as to say, "Some modern horologists claim that Harrison's work facilitated England's mastery over the oceans, and thereby led to the creation of the British Empire – for it was by dint of the chronometer that Britannia ruled the waves."



MAPPING THE WORLD
Captain Cook used a clock to map lands, such as New Zealand, for the first time

ALAMY X1, GETTY X2

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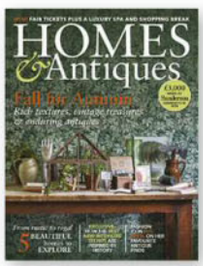

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Public Events Programme

Lectures & Tours at Society of Antiquaries of London

Free Public Lectures

Lectures are free, but space is limited and booking is recommended!

19 January (1-2.00 pm)
'The Waddesdon Bequest at the British Museum, A New Look' by Dora Thornton, FSA, and Tom Fotheringham

23 February (1-2.00 pm)
'The Camera and the King: Photographing the Excavation of Tutankhamun's Tomb' by Christina Riggs, FSA

22 March (1-2.00 pm)
'Denim: Fashion's Frontier' by Emma McClendon, a Janet Arnold Award recipient

26 April (1-2.00 pm)
'Royal Gold and Royal Rubbish: Metal-Detecting and the Anglo-Saxon Palace at Rendlesham, Suffolk', by Christopher Scull, FSA

31 May (1-2.00 pm)
'Glastonbury Abbey Excavations 1904-79: Reassessing the Medieval Monastery', by Prof Roberta Gilchrist, FSA

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- 26 April (10.30 am)
- 31 May (10.30 am)



Photo of Howard Carter peering into the gilded shrines surrounding Tutankhamun's tomb.

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Q&A

YOU ASK, WE ANSWER

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OUR EXPERTS

EMILY BRAND

Social historian, genealogist and author of *Mr Darcy's Guide to Courtship* (2013)

GREG JENNER

Consultant for BBC's *Horrible Histories series* and author of *A Million Years in a Day* (2015)

SANDRA LAWRENCE

Writer and columnist, with a specialist interest in British heritage subjects

MILES RUSSELL

Author and senior lecturer in prehistoric and Roman archaeology at Bournemouth University

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ON THE THRONE
Suits of armour were vital for the battlefield, but vexing for a knight in the latrine

DID YOU KNOW?

MISSING THE POINT

'Witch-prickers' were (usually) old women employed to poke the moles and other skin imperfections of those accused of witchcraft. If the mole bled, they were innocent; if not, they were guilty. The test was made even more questionable as many 'pricking-needles' had retractable points.

HOW DID KNIGHTS IN ARMOUR GO TO THE TOILET?

The honest answer is that we're not really sure. Armour changed a lot over the centuries – when William the Conqueror invaded in 1066, he wore just a long mail shirt, so answering nature's call was relatively simple. It was a very different prospect, however, when full plate armour was developed by Italian and German craftsmen in the 1400s.

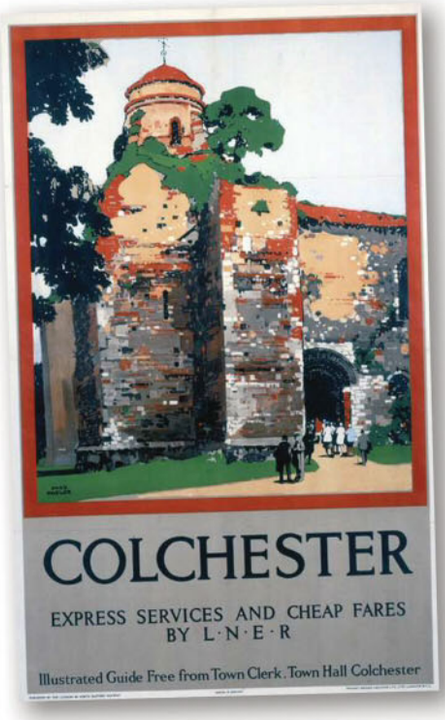
Suits of armour still didn't have a metal plate covering the knight's crotch or buttocks as this made riding a horse difficult, but those areas were protected by strong metal skirts flowing out around the front hips (faulds) and buttocks (culet). Under this dangled a short chainmail shirt to prevent an enemy jabbing anything sharp upwards between the legs. And beneath that, a knight also wore quilted cotton leggings so his limbs wouldn't chafe. But to stop the steel leg plates sliding down painfully onto the ankles, they had to be held up by a waist belt, or by being attached to the torso plate.

While wearing all that, a knight desperate for the toilet would have most likely needed the assistance of his squire to lift or remove the rear culet, so that he could squat down. The fact, however, that the leg armour was often suspended tightly from the waist belt, worn over the leggings, might have required it to be detached first before a chivalric chap could comfortably drop his trousers. This would have been a particular nuisance if the knight was suffering from dysentery, so it was likely that he may have simply chosen to soil himself. **GJ**

ISTOCK X2

WHAT DOES 'CHESTER' MEAN?

The most commonly seen element in the names of British towns is surely the English suffix 'chester', which can appear in a variety of other forms, such as 'castor', 'caistor', 'cester' and 'eter', and the Welsh prefix 'Caer' or 'Car'. They all derive from the Latin *castra*, meaning camp, and it usually implies that those places had a Roman origin. This is essentially true, but what tends to be overlooked is that 'chester' and its variants do not appear in place names until the late- or post-Roman, period. Therefore, a town with *castra* in the name strongly suggests it had continued to be used and defended as the political system broke down in the fifth century. This is certainly the case with places like Colchester, Gloucester, Cardiff, Caernarvon and Exeter. **MR**



THE ONLY WAY IS ESSEX
Colchester is Britain's oldest Roman town, established soon after the AD 43 conquest

DID YOU KNOW?

THAT'S THE WAY TO DO IT!
Now a mainstay of the British seaside, the puppet 'Mr Punch' had his first outing in England on 9 May 1662. Although, he was called Pulcinella back then. Famed diarist Samuel Pepys described the show as "very pretty" and noted that the event was a "great resort" for men of fashion.



WITH A BANG
Ford's Theatre was ringing with hysterical laughter at the moment Lincoln was shot



What play was Abraham Lincoln watching when he was shot?

Tom Taylor's *Our American Cousin* was a farcical comedy about a redneck American who travels to England to claim his inheritance from aristocratic relatives. Despite only having a few lines, the bumbling, eccentric Lord Dundreary stole the show, thanks to actor EA Sothern. Everything from his crazy costume and hairdo to his silly voices and ad-libbing made Dundreary the highlight. His over-the-top sideburns even became known as 'Dundrearies'.

When President Abraham Lincoln went to see *Our American Cousin* on 14 April 1865, Sothern wasn't in the cast, but it still promised to be an uproarious night. As an actor himself, John Wilkes Booth knew the play well so was able to time his shot with a guaranteed hoot, in the hope the roar of laughter would cover the blast. **SL**

39
The number of years that the Christian monk Saint Simeon Stylites spent living on top of a tiny platform in the fifth century AD.

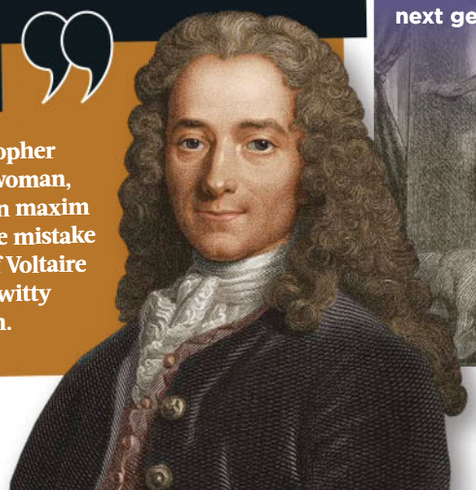
HOW WERE THE SPARTAN WARRIORS TRAINED?

In Ancient Sparta, all male citizens had to undergo a compulsory training regime, 'agoge', before joining the army. At seven, boys were placed in the care of the military and housed in barracks away from society. They were starved, deprived of comforts and taught – through brute force and severe punishment – to march, steal, fight and kill to defend the state. If they lived to 30, not easy given that dying in battle was considered a basic duty, graduates could marry and produce the next generation of elite warriors. MR



THIS IS SPARTA!
Male Spartans dedicated their entire lives to the military

"I DISAGREE WITH WHAT YOU HAVE TO SAY, BUT I'LL DEFEND TO THE DEATH YOUR RIGHT TO SAY IT."



Although regularly attributed to the great philosopher Voltaire (pictured), we actually have an English woman, Evelyn Beatrice Hall, to thank for the well-known maxim on the power of free speech. It's a understandable mistake to make – it appeared in Hall's 1906 biography of Voltaire and it certainly sounds like one of the pithy and witty things the Frenchman would have come out with.

IN A NUTSHELL

BABYLON

On the bank of the Euphrates lies one of the ancient world's most powerful and mythical cities...



TOWERING LEGEND
Could the Biblical Tower of Babel have been a Babylonian ziggurat?



Long believed to be of Hammurabi, this sculpture may pre-date his reign

Where is Babylon?
Babylon, one of the most famous cities from any ancient civilisation, was the capital of Babylonia in southern Mesopotamia. Today, that's about 60 miles south of Baghdad, Iraq.

How and when did it become such a huge empire?
Little is known about Babylon's early history, but ancient records suggest that around 4,000 years ago, it functioned as some sort of administrative centre. Then in 1894 BC, the city was conquered by Samuabum, a chief from an area around modern-day Syria, who turned it into a petty kingdom. The city's fortunes changed dramatically in 1792 BC, when its sixth king, Hammurabi, ascended the throne.

Who was Hammurabi and what did he do?
During his reign, 1792–50 BC, Hammurabi expanded the city-state along the Euphrates River and annexed many old urban centres, such as Ur, Uruk, Isin and Larsa. Now the ruler of a mighty empire, Hammurabi, who was revered as a god, established new rules for his people. The Law Code of Hammurabi, which dates to c1754 BC, consists of 282 laws. Carved onto a four-ton piece of basalt – now on display at the Louvre Museum in Paris – the code contains many harsh punishments for breaking these laws, including demanding the removal of the guilty party's tongue, hands, breasts, eye or ear. The Code of Hammurabi, however, is also one of the earliest examples of the idea of an accused being considered innocent until proven guilty.

Justice was issued according to the three classes of Babylonian society – those with property, freed men and slaves. If a doctor killed a rich patient, he would have his hands cut off as punishment but if his victim were a slave, only financial restitution was required.

What happened after Hammurabi's reign?
The empire declined after his death, leaving Babylonia vulnerable to capture by Hittite Mursili I in 1595 BC. He was followed by a series of Kassite Kings, originating from the Zagros Mountains in the north-east of Babylonia, who ruled peacefully for around 500 years. During this time, the Babylonian language became widely used across the Middle East, and the power of the empire was stabilised.

When did Babylonia truly begin to flourish?
From 1200 to 600 BC, a series of wars between Assyria and Elam caused severe disruption for the Babylonian Empire. But in 605 BC, a new King emerged: Nebuchadnezzar II.

Through a series of military conquests, Nebuchadnezzar created an even bigger empire, stretching from the Persian Gulf to the borders of Egypt. Inside the city of Babylon itself, he began an extensive building and reconstruction programme, which included huge shrines, three major palaces and the Ishtar Gate, the ceremonial entrance to the inner wall of the city.

What about the Tower of Babel?
Mentioned in the opening book of the Bible, the Book of Genesis, and often dismissed as a mythical structure, the Tower of Babel has also been associated with known Babylonian structures such as the Etemenanki (or 'temple of the foundation of heaven and earth'), a pyramid-like ziggurat dedicated to the god Marduk in c610 BC. The structure stood over 90-metres high, but was destroyed after Alexander the Great captured Babylon (despite his effort to restore it).

What were the Hanging Gardens of Babylon?
One of the Seven Wonders of the Ancient World, the Hanging Gardens were supposedly built by Nebuchadnezzar for his homesick wife, Amyitis, who missed the green hills of her homeland.

The gardens' location has never been definitively established, but they are thought to have comprised an ascending series of tiered gardens full of trees, shrubs and vines. The search for their location continues, but many have dismissed the existence of the gardens as myth.

What happened to the city?
The city fell to the Persians in 539 BC – yet continued to flourish as a centre of art and education. Even when Alexander the Great felled the Persian Empire in 331 BC, he ordered that Babylon remain untouched. After his death, however, the extent to which the empire was fought over saw the city's inhabitants flee, and Babylon steadily fell into ruin.

In the 1980s, Babylon was extensively reconstructed by the Iraqi ruler Saddam Hussein, so there is little of the original city that is still visible.



BATTLING BABYLON
A relief of the Battle of the River Ulai, which launched a four-year campaign by the Assyrians against Babylon



HARD AS STELE
This copy of the Code of Hammurabi, consisting of 282 laws, was carved on a basalt stele

ALAMY X1, GETTY X7, MARY EVANS X1

ILLUSTRATION: SOL 90, ALAMY X2, GETTY X2, REX FEATURES X1

HOW DID THEY DO THAT?

THE TOWER OF PISA

It was a building blunder that became Italy's engineering marvel

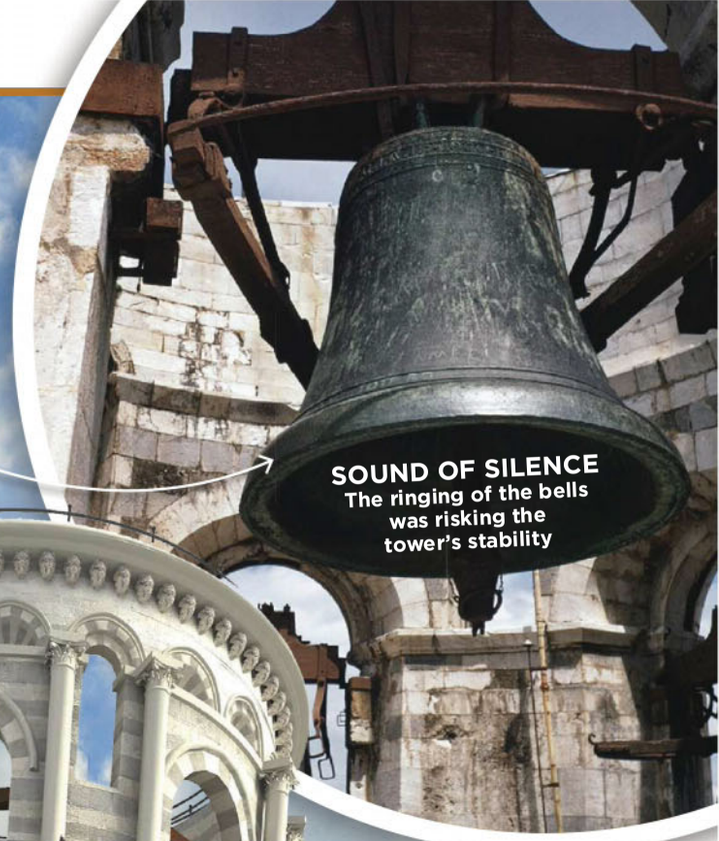
Construction on the Tower of Pisa, which began in 1173, had reached only the third storey when architects noticed that the white-marble campanile (bell tower) was leaning. Before serious attempts could be made to correct it, war broke out between the Italian city states so building was halted for over a century. It wouldn't be until the late-14th century that the tower was finally completed, but nothing had managed to right the lean. Today, following extensive work, the Tower of Pisa is safe from toppling, but it will never stand fully straight – not that the millions of tourists who visit it every year would want it to...



MIRACLES IN MARBLE
The Tower of Pisa bell tower is one of four extraordinary buildings in the *Piazza dei Miracoli* (Field of Miracles)

SAVE THE TOWER
During World War II, it was thought that the Germans were using the tower as an observation post. US sergeant, Leon Weckstein, was about to order an artillery strike on the position, but – on seeing the beauty of the tower – chose not to.

THE BELL TOLLS
Over the years, seven bells were installed, the largest weighing 3,620kg. As restoration efforts gathered pace in the 20th century, however, they were silenced as it was believed that their movement made the lean worse.



SOUND OF SILENCE
The ringing of the bells was risking the tower's stability

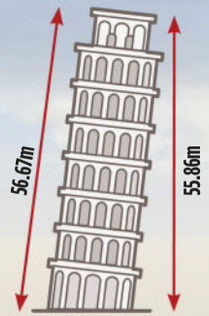
VERTICAL

LEAN 3.99°

LOGGIAS
The tower consists of eight storeys. All but the ground floor and the bell tower have an external gallery, called *loggias*, supported by 30 columns.

LUCKY ESCAPE
When building was stopped the first time, due to war, the tower was already leaning. The break, however, allowed the tower and its foundations to settle – without it, the tower would have probably collapsed.

SIZE

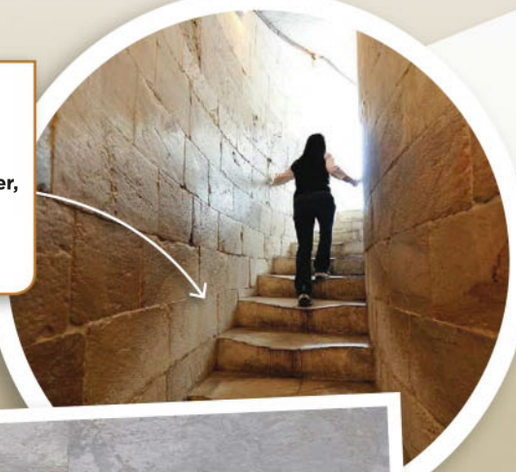




The Tower of Pisa has been estimated to weigh around 14,500 tonnes.

STEP UP

Two spiral staircases run to the top of the tower. Whereas one has 294 steps, however, the other has 296. It needed two extra to compensate for the height difference.



TOWER DECORATING

Details from the first level of the Tower of Pisa



CARVINGS

Above the entrance, there is a Latin inscription detailing the beginning of construction, and a collection of animals and fantastical beasts on each pillar. There are also carvings of ships – referring to the maritime history of the Republic of Pisa.

SHORT ORDER

When the second phase of building commenced in 1272, chief architect Giovanni di Simone attempted to correct the lean by making the next storey taller on the shorter side. This just made it heavier, which caused the tower to sink more.

FLAWED FOUNDATIONS

The design was flawed from the start. Despite plans for the tower to be 56 metres high, the foundations were only three metres deep initially. To make matters worse, the soil was unstable (the name Pisa, after all, comes from the Greek for 'marshy land').

STRENGTHENING THE STRUCTURE

At its worst, the lean was 5.5 degrees (about 4.5 metres). From 1990-2001, a major project removed earth from the taller side, which reduced the lean to under four degrees. It is thought the tower should now be stable for at least 200 years.

Q&A

WHY DO WE SAY...



Who is this Larry and why is so happy? As the phrase dates back to 19th-century Australia, the boxer Larry Foley could be a contender. The prize-winning pugilist never lost a fight – with one win pocketing him £600 – and helped introduce gloves to the sport, so had plenty to be happy about. Couple that with the similarity between the sounds of his name and the Aussie slang 'larrikin', a happy-go-lucky, yobbish teen, and the theory could be a knock-out.

WHEN WAS 'WORLD WAR' FIRST USED?

In 1918, while chatting with an American historian, the controversial war correspondent Lieutenant-Colonel Charles à Court Repington realised the recent conflict needed a name befitting its scale. He discounted 'The German War' as he didn't want to give the enemy the satisfaction of prominence, so settled on the 'First World War'. It became the title of his wartime diaries published in 1920. For most Brits, however, the term 'The Great War' was the standard sobriquet. On the outbreak of hostilities in 1939, America's *Time* magazine immediately adopted 'WW2', a phrase copied by President Roosevelt and made official by the US government in 1945. GJ

45

The waistline, in inches, of Queen Victoria's knickers, which sold at auction in 2015 for £12,090.

Why are **beards traditional** for men in the Navy?

Beards are common today, but they were actually the exception rather than the rule during the Age of Sail. The current regulations were developed in Victorian times and, perhaps surprisingly, the Queen herself took a personal interest in the matter.

At first – under Queen's Regulations, 1861 – officers, petty officers and seamen of the Fleet had been forbidden to wear either beards or moustaches, but this was changed with the 1869 Admiralty Circular Letter No. 36, which permitted 'a full set' (both moustache and beard, required to meet). Victoria was unamused as she preferred beards without moustaches, but was willing to accept them together. The Royal Navy is still the only British armed force that allows beards (with the exception of one army rank, the Pioneer Sergeant).

Each sailor must apply for "permission to stop shaving". After a few weeks, the Master at Arms then decides, at his own discretion, if the sailor has enough facial hair for 'a full set.' If the beard is scrappy or looks daft in any way, the sailor is ordered to shave it off. Designer stubble, 'hipster' beards and anything taking "an excessive amount of time to grow" is generally off limits. While on land, Royal Marines are considered a branch of the army when it comes to facial hair so they must remain smooth-chinned, though a moustache is acceptable. **SL**



A CLOSE SHAVE
Sailors can be ordered to shave off their beards if deemed unrespectable



VC MEDAL: LORD ASHCROFT X1, ALAMY X1, BRIDGEMAN IMAGES X1, GETTY X1, ISTOCK X2

Has a woman ever won the **Victoria Cross**?

Although women have been eligible for the Britain's highest military decoration, the Victoria Cross, since the 1920s, no woman has yet been the recipient of one.

The closest a woman has come was the 19th-century nurse, Elizabeth Webber Harris, who displayed "indomitable pluck" while tending soldiers in India. She was the only woman willing to remain with her husband's regiment, the Bengal Fusiliers, during the cholera epidemic of 1869, risking not only disease but also attacks from the local tribesmen. The soldiers she treated were so struck by Harris's bravery that they received special permission to award her a replica VC (pictured, left). **EB**



SHAKESPEARE THE STONER
It is certainly plausible that drugs may have influenced some of the Bard's work – *A Midsummer Night's Dream* anyone?

DID YOU KNOW?

RED, WHITE AND BLUE NO LONGER IN THE RED

On 8 January 1835, the spectacular announcement was made that the government of US President Andrew Jackson had paid off the entire national debt. This remains the only time the country has been in the black, and it went on to last exactly one year – before a depression set in.

DID PEOPLE TAKE DRUGS IN TUDOR TIMES?

Recent analysis of clay pipes found near William Shakespeare's house revealed that they contained traces of narcotics, leading to wild media speculation that the Bard's famed imagination was stimulated by drugs.

That said, of 24 pipes examined, two had traces of coca plant, which would have been extremely rare in 16th-century Stratford-upon-Avon. Coca leaves – from which cocaine was first derived in the 19th century – were used as both stimulant and medicine by the Inca of Peru, but the Spanish showed no interest in introducing them to Europe. More commonly imported was *Cannabis sativa*, yet this was primarily used to make hemp clothes and rope, rather than joints.

In Elizabethan England, the foremost recreational drugs were actually alcohol and tobacco. The fact that cannabis and hallucinogenic nutmeg have been found in smoking pipes might suggest people were also getting high, but there are no written sources mentioning such habits. As for Shakespeare, the evidence is especially suspect – doobie or not doobie, that is the question! **GJ**

WHO BUILT THE FIRST CANALS?

The first irrigation channels go back to the very earliest agricultural societies of antiquity. Complex water supply and storage facilities were being dug in Mesopotamia from the fifth millennium BC and it was the Greeks who developed sophisticated artificial waterways for the transportation of people and goods. The most impressive ancient canal, however, was that established by the Chinese Emperor Yang Guang in the early seventh century AD. Although modified over time, this 1,100-mile 'Grand Canal' is still in use today. MR



WATERWAY TO GO
The Grand Canal in China is the longest man-made waterway in the world

WHAT IS IT?



Although unlikely to provide much protection in the heat of battle, this Iron Age helmet was nonetheless a symbol of great prestige and power. With a bird of prey perched on top – believed to hold supernatural significance – it belonged to, and was buried with, a Celtic chieftain at Ciumești, in modern-day Romania. The bird (a falcon, eagle or raven) has eyes made from yellow ivory and red enamel pupils, but its most impressive features are the large wings, which would actually flap in the wind. Although not on display at the moment (while renovations are carried out), the Ciumești helmet is held by the National Museum of Romanian History in Bucharest. *www.mnir.ro*

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ON OUR RADAR

What's caught our attention this month...

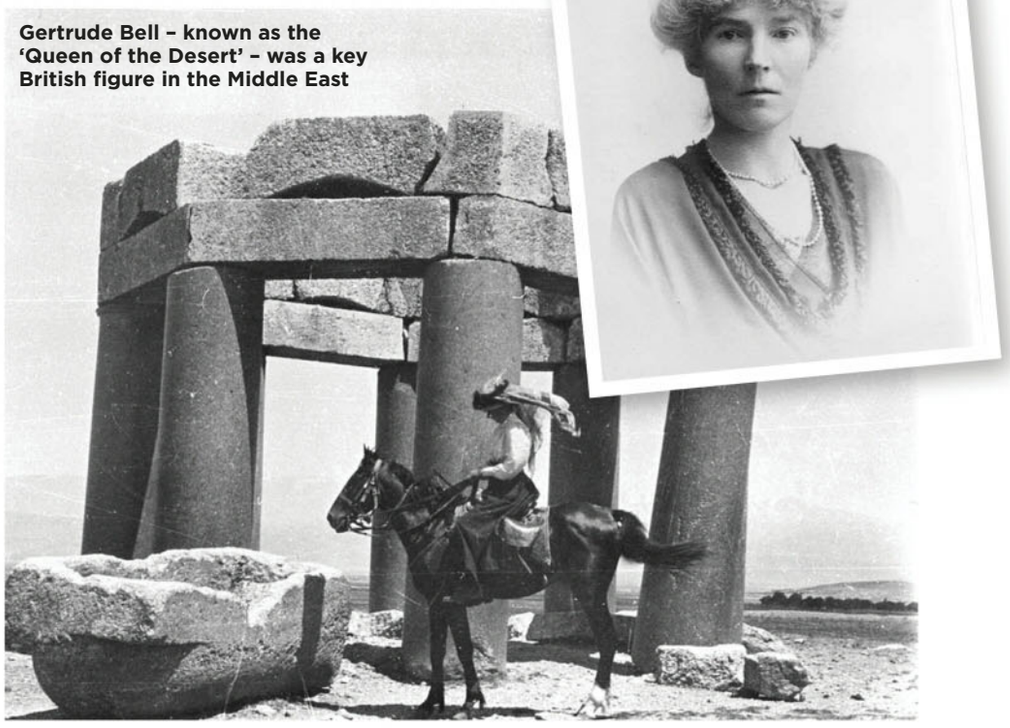
EXHIBITION

Extraordinary Gertrude Bell

Runs 30 January to 3 May 2016 at the Great North Museum: Hancock, Newcastle; for more info, go to *greatnorthmuseum.org.uk*

Explorer, writer, linguist, archaeologist, political diplomat and cartographer – Gertrude Bell certainly deserves the 'extraordinary' tag.

After years travelling the Middle East and proving herself a skilled policy maker, she was chosen as the **only female delegate for the Cairo Conference of 1921**. It was there that Bell drew the borders of a new country, Iraq, and put forward its first king. If that wasn't enough, she established the Baghdad Archaeological Museum. This exhibition focusses on her career, having collated artefacts – such as her **personal notebooks and correspondence** – from the Gertrude Bell Archive, the British Museum and Imperial War Museum.



Gertrude Bell – known as the 'Queen of the Desert' – was a key British figure in the Middle East

GERTRUDE BELL ARCHIVE, NEWCASTLE UNIVERSITY X2, VICTORIA AND ALBERT MUSEUM, LONDON X1, HBO ENTERPRISES 2014 X1



EXHIBITION

Pleasure and Pain

Ends 31 January 2016 at the Victoria and Albert Museum, London; book tickets from *www.vam.ac.uk*

This is your last chance to step into someone else's shoes and explore how footwear has changed over the last 2,000 years. The V&A's major exhibition, which boasts more than **250 pairs of shoes in its wardrobe**, brings together famous designers of the modern age and examples from various historical periods to show how fashion trends have developed – and **why humans will sacrifice comfort** for the perfect shoes.

Chopines, like this 17th-century pair, were designed to keep feet out of the mud, but they soon became a status symbol – the higher the platform, the richer the wearer



TV

The Knick

The second series is rumoured to start airing on Sky Atlantic in January 2016

Back to **New York's Knickerbocker Hospital** for another ten episodes with its pioneering surgeons, led by Clive Owen's Dr John Thackery.



The coins come from as far apart as the Black Sea (left) to China (right)

EXHIBITION

Pax Mongolica

Runs 5 January to 1 May 2016 at the Ashmoleon, Oxford; search at *www.ashmolean.org*

In 1206, the Mongol ruler Genghis Khan established an empire that would grow into the world's largest contiguous domain, covering most of Eurasia. This new exhibition uses **coins from the Mongol Empire** to reveal the striking diversity of all the cultures living under its 162-year rule.



You can also find accounts of how WWI affected your area

EBOOK

World War One at Home

Find it at *bit.ly/WWOneAtHome*

With the World War I centenary entering a new year (marking 100 years since the Somme) there is no better time to begin exploring **the BBC's interactive ebook**. The vast collection of stories, archival documents, photographs and film show what life was like in wartime Britain and Ireland – fascinating and moving.



Eddie Redmayne is being tipped for awards glory for his double role as Einar and Lili

FILM

The Danish Girl

In cinemas 1 January 2016

While working on her latest painting in the early 1920s, Danish artist Gerda Wegener asks her husband, Einar, if he would pose for her – as a woman. It was **a moment that would change both of their lives** forever.

Einar – played by Oscar-winner Eddie Redmayne – comes to the revelation that he is a woman in a man's body. He starts dressing in womens clothing and calls himself Lili Elbe, but when Gerda (the always impressive Alicia Vikander) discovers the secret, their marriage feels the strain.

Based on a remarkable true story, *The Danish Girl* (by *Les Mis* and *The King's Speech* director Tom Hooper) is a touching drama. Will Gerda stay with her husband? And **what steps will Einar/Lili be willing to take** to embrace his or her true identity?

EVENT

Organ recital

29 January 2016, 1pm, at National Museum Cardiff, free entry; find out more at *www.museumwales.ac.uk/cardiff*

Not only is National Museum Wales hosting its free recital in the beautiful surroundings of its art galleries in Cardiff, but the music will be performed on a **visually and euphonically enthralling chamber organ from the 18th century**. It used to belong to the great Welsh patron of the arts, Sir Watkins Williams-Wynn.



It's no pipe dream – guest soloists, historic venue and a 1774 chamber organ

ALSO LOOK OUT FOR

- **Child's Play – an exhibition exploring how toys have changed over the last 150 years – ends at the National Museum of Scotland on 10 January. More at *www.nms.ac.uk***
- **The third series of the swashbuckling BBC series, *The Musketeers*, will begin in January, with Rupert Everett and Matthew McNulty joining the cast.**

NATIONAL MUSEUM CARDIFF X1, ASHMOLEAN MUSEUM, UNIVERSITY OF OXFORD X2



SCENIC STRONGHOLD
For around four centuries, Caerlaverock Castle was part of the frontline, defending the borders of Scotland

BRITAIN'S TREASURES...

CAERLAVEROCK CASTLE Dumfries

Perched near the border between Scotland and England are the unique ruins of one of Britain's great medieval castles – a triangular treat with a soupçon of the Renaissance

GETTING THERE:
The castle is about seven miles from Dumfries on the B725 (DG1 4RU). There is parking at the site or the Stagecoach Western D6A from Dumfries drops you off a five-minute walk away.
TIMES AND PRICES:
Summer 9.30am-5.30pm, winter 10am-4.00pm. Tickets: £3.30-5.50.
FIND OUT MORE:
For general enquiries, call 01387 770244 or visit *www.historic-scotland.gov.uk*



The year was 1300 and the Scots were fighting for their independence from English rule. And thanks to warriors such as William Wallace, they had made gains, won battles and even gave the 'Hammer of the Scots', King Edward I of England, reason to sweat. So much so that he led a force himself to the border. With some 87 knights and 3,000 men, he threw his full power at the siege of Caerlaverock Castle, a small but formidable fortification. Its triangular shape, with a tower at each corner, a double moat and good natural defences caused one account to say it was, "so strong a castle that it feared no siege", but the might of Edward was too great. Caerlaverock fell – one of the many times the castle changed hands in its violent and battle-scarred history.

BORDER PATROL

The origins of Caerlaverock Castle (meaning 'fort of the skylark') go back to sometime around 1220. The Scottish King Alexander II had decided that he needed trustworthy men defending the West March from the English, so he granted suitable lands to Sir John Maxwell, who built the first Caerlaverock Castle. It didn't last - although the foundations can still be seen – and a stronger, more defensible replacement was constructed some 200 metres to the north. Completed in the 1270s, that was the distinctive medieval stronghold we know today.

The first major test the castle faced was the 1300 siege. Despite

ANDY SWEET/STRAVAIGING AROUND SCOTLAND X4, ALAMY X2, CROWN COPYRIGHT - HISTORIC ENVIRONMENT SCOTLAND X1



WHAT TO LOOK FOR...



1

TRIANGULAR SHAPE

It is not clear why it was built in this shape, but the design is unique among British castles. Get a sense of it with a slow lap.



2

NITHSDALE LODGING

Added in the 1630s, this striking Renaissance-style facade offers a pleasing contrast against the stark, medieval outer walls.



3

THE OLD CASTLE

At the end of a short nature trail leading through the nearby woods, you will find the foundations of 'Old Caerlaverock Castle'.



4

SIEGE WARFARE

The violent history of this border fortification is brought to life by an exhibition on siege warfare, complete with a reconstruction of a trebuchet, known as 'Warwolf'.



5

THE DOUBLE MOAT

The castle used to be protected by two moats. You can still see the mark left by the drained outer ring, while the inner moat can best be enjoyed from the demolished wall.



6

STONE CARVINGS

Dotted around are examples of both medieval graffiti (from the craftsmen and masons who worked on the castle) and 17th-century carvings, such as this coat of arms.

"The Maxwells held out for 13 weeks"

being lost to Edward, Caerlaverock proved itself to be a strong fort as the Maxwells had only 60 men, yet they withstood the far superior numbers and siege weaponry of the English for two days.

Caerlaverock was returned to Sir Eustace Maxwell in 1312, but his allegiance kept seesawing from one side of the border to the other, meaning the castle was actually besieged at different times in the 14th century by both the English and the Scots.

These attacks throughout the Wars of Independence took their toll on the castle walls, forcing the Maxwells to make extensive repairs and additions during the next century. It wasn't long, however, before Caerlaverock was back in the fray. The Maxwells, who were Catholics, supported Mary, Queen of Scots, so the castle was besieged by the English once again in 1570. Then any periods of peace – such as in the early 1600s, when Robert Maxwell, First Earl of Nithsdale, built the unusual Nithsdale Lodging interior – were broken up by sporadic fighting.

The year 1640 witnessed the last siege to befall Caerlaverock. The Maxwells held out for 13 weeks against religious dissenters – the Covenanters – before they had to surrender. And so that the castle could no longer be a thorn in the side of an attacking force, the whole south wall was demolished. It was never repaired, providing a potent reminder of Caerlaverock's 400-year military service.

YOUR VISIT

It is easiest to begin your trip to Caerlaverock from Dumfries, as it is only a short drive down the B725. The turning is near to where the River Nith meets the Solway Firth, and the road passes through a 16th-century stone arch. Once you've arrived, there are many ways to start your exploration.

You could walk around the banks of the old moat, taking in a 360-degree view of the castle, or you can walk straight through the twin-towered gatehouse and wander through the ruins. Outside the walls, don't forget to find the small siege-warfare exhibition and the nature trail that leads to the original castle foundations. There is also a visitor centre, shop, café and a castle-themed adventure park so children can act out one of the sieges. A visit to Caerlaverock will make for an atmospheric and inspiring afternoon.

WHY NOT VISIT...

Make more of your trip with a visit to one of these nearby attractions

DRUMLANRIG CASTLE

Either explore the 120 rooms of the 17th-century stately home, or try one of the trails, mountain bike paths or salmon fishing spots in the vast estate. *www.drumlanrigcastle.co.uk*

NEW ABBEY CORN MILL

Set in the picturesque village of New Abbey and with a restored water-powered mill, this gives a glimpse of how rural life in Scotland has changed. *www.historic-scotland.gov.uk*

ROBERT BURNS HOUSE

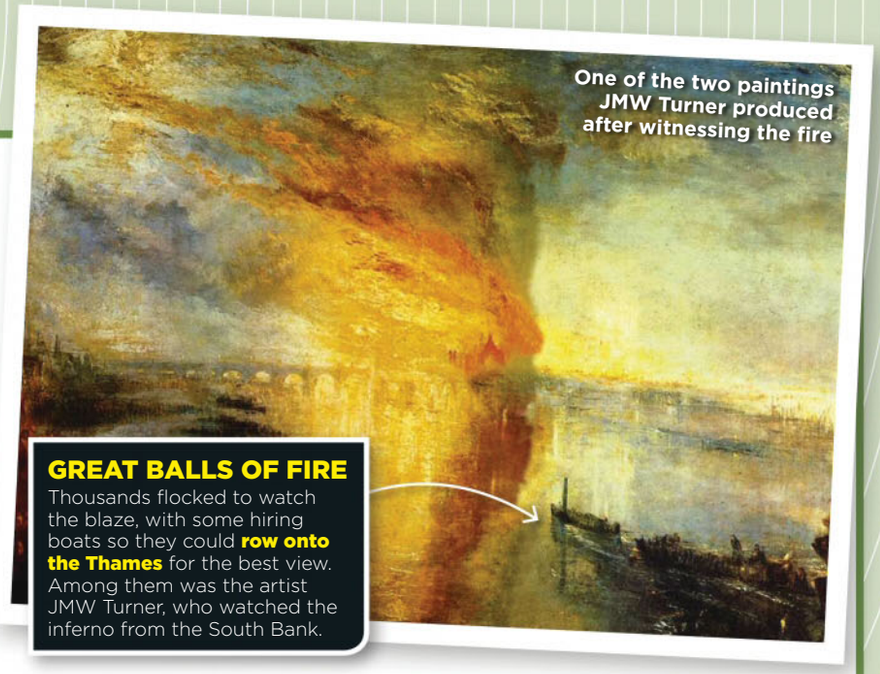
In Dumfries is the house where Robert Burns wrote some of his best-known poems, featuring original manuscripts and the desk and chair where he worked. Search at *www.visitscotland.com*

PAST LIVES

HISTORY THROUGH THE EYES OF OUR ANCESTORS

GATHERING AROUND THE FIRE AT PARLIAMENT

Jon Bauckham ignites the story behind the capital's biggest blaze since the Great Fire of London



One of the two paintings JMW Turner produced after witnessing the fire

GREAT BALLS OF FIRE
Thousands flocked to watch the blaze, with some hiring boats so they could **row onto the Thames** for the best view. Among them was the artist JMW Turner, who watched the inferno from the South Bank.

READER'S STORY



Tim Furlong,
Saffron Walden

I am the great-great-great-grandson of Patrick Furlong, one of the men who accidentally burned down the Palace of Westminster.

My parents are members of a family history society and knew about Patrick's existence, but they didn't learn about his link to the fire until Caroline Shenton came to do a talk about her book, *The Day Parliament Burned Down*, a few years ago. They were actually able to provide Shenton with further details about him – for example, that he was born in Ireland in 1796 and came to London as a labourer, settling in a slum that was just like something out of a Charles Dickens novel.

The fire, however, didn't appear to have any significant repercussions for Patrick, as he continued to live in the city and went on to become a watchman at Somerset House until his death in 1866.

My family all love a good laugh, so learning about Patrick's involvement actually brought us closer together. We thought it was typical of the happy-go-lucky nature of us Furlongs – trying to earn an honest crust but ending up in the wrong place at the wrong time!



The Furlong family visit the area around Parliament – where their ancestor found fiery fame

For anyone visiting Georgian London, the Palace of Westminster would have been a sight to behold. The home to Parliament for over five centuries was a sprawling, gothic complex, which had been constantly expanded and bore the handiwork of some of the nation's finest architects. But inside, the Palace was cramped and hazardous, with its snaking medieval corridors being a source of consternation for MPs. As the chance of relocating was off the cards, Westminster officials hoped that a spot of spring-cleaning would do some good.

So on 16 October 1834, Clerk of Works Richard Weobley recruited two labourers, named Joshua Cross and Patrick Furlong, to clear out some of the rubbish, beginning with two cart loads of tally sticks – small pieces of wood once used for accounting by the Exchequer. Directed to destroy them in stoves found in the cellars beneath the Palace, the pair left the sticks to burn unsupervised.

Later in the afternoon, a couple of tourists – being guided around the House of Lords by the housekeeper, Mrs White – noticed smoke rising up through the floor. White recalled that the chamber was "in a great smother and the throne could scarcely be seen". Yet remarkably, the labourers continued to burn the tallies in great handfuls and once their work was done, they closed the stove doors and headed to the Star and Garter pub.

At 6pm, Mrs Mullencamp, the wife of a doorkeeper, let out a ghastly shriek as she discovered the building was on fire. Half an hour later, before much could be done to quell the fire, an explosion ripped through the Palace, sending flames into the sky. There were no fatalities, but much of the complex was reduced to ashes, taking with it thousands of priceless historical records.

Luckily for Cross and Furlong, the blaze was blamed on the chimney flues, which had not been cleaned in more than a year. Still, this did not prevent Prime Minister Lord Melbourne – who had been forced to watch the inferno amidst a crowd of jeering onlookers – from calling it "the greatest instance of stupidity on record".

In many ways, however, the fire was a blessing in disguise, as it cleared the way for Charles Barry and Augustus Pugin's world-famous replacement we know today. As one newspaper remarked, the burning of Parliament also represented to some the "commencement of a new era in the history of England" – a symbolic break between the politics of medieval monarchs and that of a modern, democratic society.



Tally sticks, which caused the fire, had been used by the Exchequer since medieval times

GET HOOKED

Caroline Shenton's award-winning book, *The Day Parliament Burned Down* (2012), is devoted to the incident and paints a vivid picture of society at the time. A documentary about the fire produced by BBC Parliament can also be watched online at *bit.ly/1WLNO0s*.

DO YOU HAVE AN ANCESTOR WITH A STORY TO TELL? GET IN TOUCH...

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GETTY X2

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* Tested under the guidance of Prof. Jason Ellis at Northumbria University's Centre for Sleep Research.

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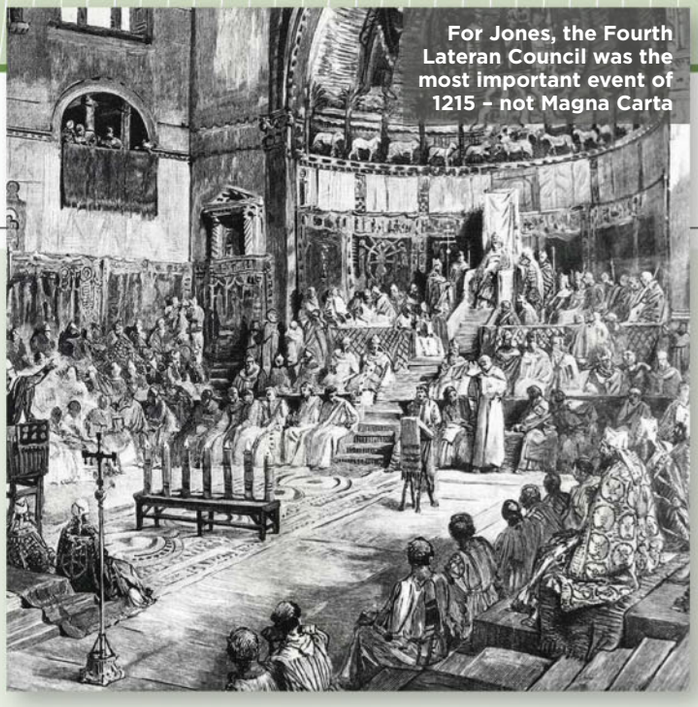


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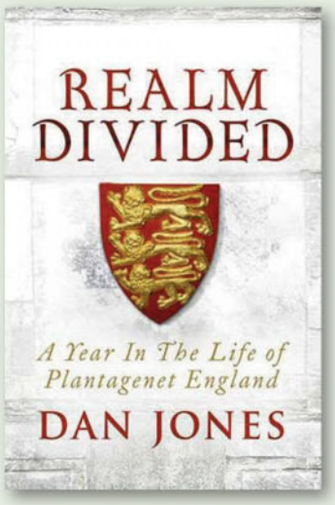
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BOOKS



For Jones, the Fourth Lateran Council was the most important event of 1215 – not Magna Carta

BOOK OF THE MONTH



Realm Divided: a Year in the Life of Plantagenet England

By Dan Jones
Head of Zeus, £20,
304 pages, hardback

When we now think of 1215, one thing jumps immediately to mind: Magna Carta. Yet, historian and TV presenter Dan Jones argues there were much more important things going on – and, in any case, the effects of the historic charter would not be felt for some time. The greater concern in that pivotal year was civil war, which raged even after Bad King John's death. Mixing a clear-eyed look at the complexity of feudal power struggles with stories of the grit and grime of life for the poorest members of society, this is an insightful overview of the state of England 800 years ago.

MEET THE AUTHOR

Dan Jones delves deeper into 1215 than Magna Carta – there was civil war, church councils and villagers biting each others' thumbs off too...

What misconceptions do we have about 1215?
We tend to think that the year 1215 was only about Magna Carta, and that the charter at Runnymede meant then what it means today. Not so.

If you'd been assessing what really mattered about 1215 at the end of that year, then you'd have judged Magna Carta a failure – because its end result had been the start of a terrible civil war. You may well have thought that the Fourth Lateran Council, a great reforming meeting of the Church in Rome held in the autumn of 1215, would be the event that was most likely to shape the future of England, as it discussed the Fifth Crusade.

What was life like for the 'ordinary' person in 1215?
That's a bit like asking what life is like for the ordinary person today. It varied wildly according to who you were, where you lived, how wealthy you were, and so on. What we can say, however, is that the experiences of the King and his barons, which usually dominates our accounts of this time, certainly did not count as 'ordinary'. They were really the outliers.

Exactly how pivotal was the year to the course of England's history?
Hugely so, but mainly in retrospect. The implications of Magna Carta were played out from a distance of some years. It's true that 1215 came to be seen as a formative year in British history (and world history, really), but at the time it was also just another year in the life of medieval England.

Are there any stories that stood out for you, or that you found surprising?
Despite the politics and civil war, my favourite parts of the book to write were the bits about getting drunk, swearing, priests disgracing themselves, villagers fighting or even biting each others' thumbs off, the crazy visions of hermits, and things like that.

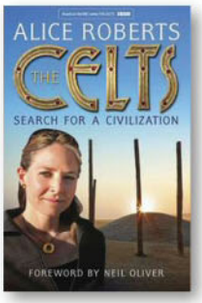
These earthy, grubby, bits of life are often missing from histories of this time – strangely so, as the popular culture of medieval England was so very salty, sexy and scatological. I have a deep and serious interest in history but an essentially puerile sense of humour, and writing this book was a splendid opportunity to indulge both at the same time.

"At the end of that year, you'd have judged Magna Carta a failure"



ALAMY X1, GETTY X1

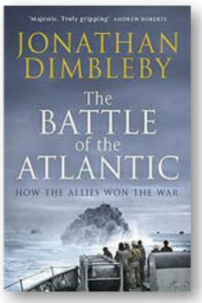
THE BEST OF THE REST



The Celts: Search for a Civilization

By Alice Roberts
Heron Books, £8.99,
320 pages, paperback

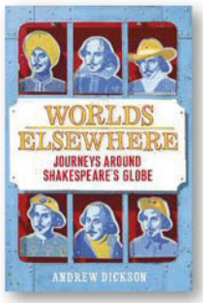
To accompany her major BBC television series *The Celts: Blood, Iron and Sacrifice*, Alice Roberts offers a lively take on the still-mysterious Celts. With so much known about the Romans, the Celts are at risk of being forgotten so the book is a wide-ranging affair, taking in language, genetics and archaeology to trace the civilisation as it spanned the whole of Europe.



The Battle of the Atlantic: How the Allies Won the War

by Jonathan Dimbleby
Viking, £25,
560 pages, hardback

Although it is overshadowed by events such as D-Day and the Battle of Britain, the struggle for control of the Atlantic was to prove one of the most important of World War II. In this pacey account, historian and broadcaster Jonathan Dimbleby explores what was at stake – and what it was like for those making the crucial decisions.

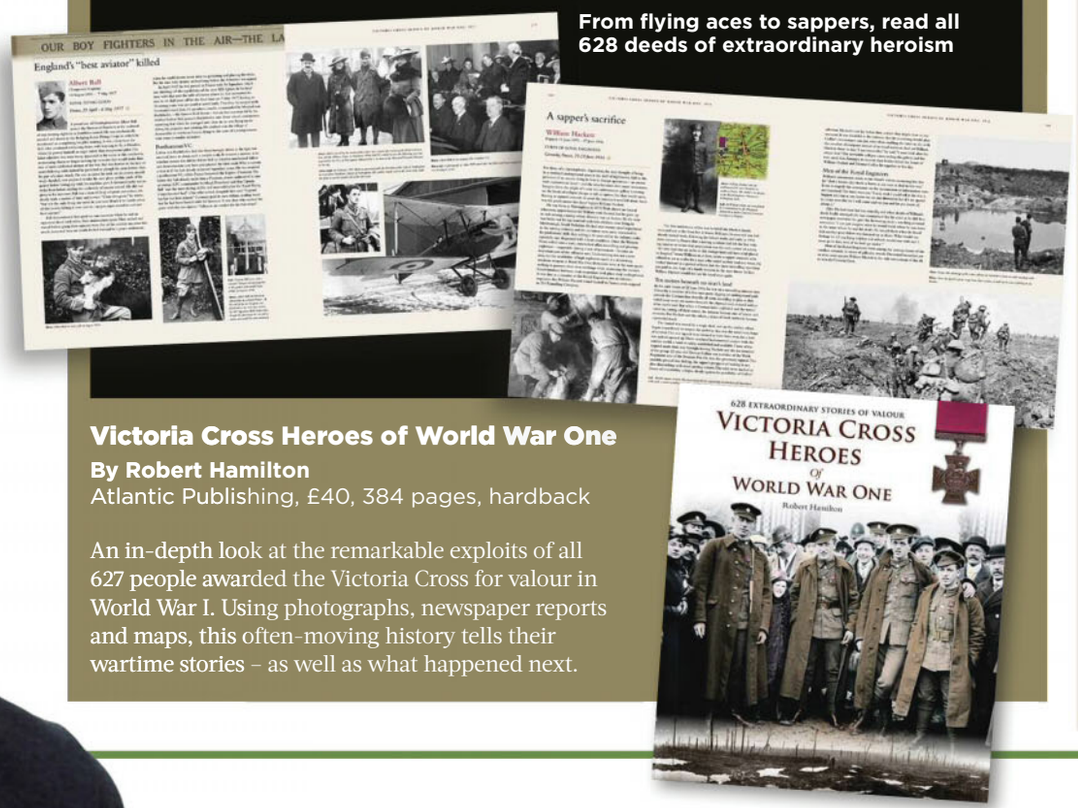


Worlds Elsewhere: Journeys Around Shakespeare's Globe

By Andrew Dickson
Bodley Head, £20,
512 pages, hardback

So much has been written about William Shakespeare, but nothing quite like this thoroughly entertaining read. From the Wild West to Nazi Germany, Dickson journeys through continents and centuries, revealing the unlikely times and places that the Bard has popped up, and the myriad ways his work has been performed and viewed.

VISUAL BOOK OF THE MONTH



From flying aces to sappers, read all 628 deeds of extraordinary heroism

Victoria Cross Heroes of World War One

By Robert Hamilton
Atlantic Publishing, £40, 384 pages, hardback

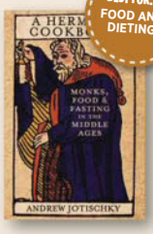
An in-depth look at the remarkable exploits of all 627 people awarded the Victoria Cross for valour in World War I. Using photographs, newspaper reports and maps, this often-moving history tells their wartime stories – as well as what happened next.

READ UP ON... HEALTH AND FITNESS

Thinking of getting in shape for the New Year? Here are three guides to how our forebears handled a healthy lifestyle



Shed that holiday weight with a trip back to 1930 and a dip in the pool at Peckham's health centre

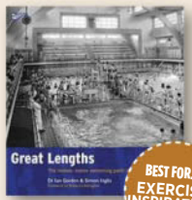


BEST FOR... FOOD AND DIETING

A Hermit's Cookbook: Monks, Food and Fasting in the Middle Ages

By Andrew Jotischky (2011)

Medieval hermits (when they ate at all) survived on such sparse fare as dates, honey and locusts. Thankfully, this book offers more appealing recipes, as well as interesting insights into the reality of religious worship.

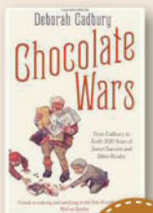


BEST FOR... EXERCISE INSPIRATION

Great Lengths: the Historic Indoor Swimming Pools of Britain

by Dr Ian Gordon and Simon Inglis (2009)

Before hitting the pool, browse this visual history of Britain's swimming culture. If nothing else, you'll be glad that woollen 'bathing suits' have fallen from fashion...



BEST FOR... BEING TEMPTED

Chocolate Wars: from Cadbury to Kraft

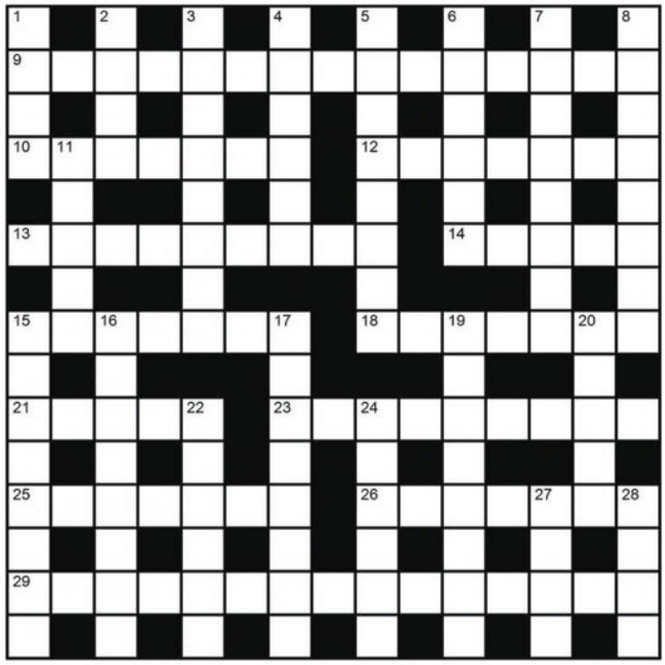
by Deborah Cadbury (2011)

Of course, abandoning your festive selection box may be too much to bear. In which case, indulge in this history of the chocolate industry, which – despite the sweet nature of its end result – turns out to have been fiercely, even brutally, competitive.

CROSSWORD Nº 25

Test your history knowledge to solve our prize puzzle – and you could win a fantastic new book

Set by Richard Smyth



ACROSS

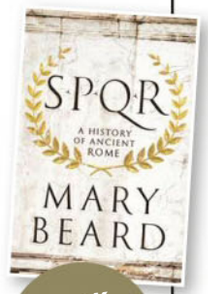
9 Ralph ___ (1872–1958), iconic English composer (7,8)
10 Nihilistic arts movement of the early 20th century (7)
12 The Little ___, a Montana river and the scene of a 1876 battle between Federal troops and Native Americans (7)
13 Natural harbour in Orkney where the German fleet was scuttled in 1919 (5,4)
14 The ___ Fountain, Nicola Salvi's Baroque fountain in Rome, inaugurated in 1762 (5)
15 Michael ___ (1791–1867), English physicist and chemist known for his contributions to electromagnetism (7)
18 SS *Great* ___, Isambard Kingdom Brunel's 'Great Babe', a iron sailing steamship used for transatlantic voyages (7)
21 *The Big* ___, publication founded in London in 1991 (5)
23 Imperial name of Ethiopian Emperor Haile Selassie I (3,6)
25 German daily newspaper, founded in 1946 by the British occupying forces based in Hamburg after WWII (3,4)
26 Noah ___ (1758-1843), American writer and pioneering lexicographer (7)
29 The First Duke of Wellington (1769-1852) (6,9)

DOWN

1 Roman poet (43 BC–AD 17), author of *Metamorphoses* (4)
2 Zola ___ (b.1966), South African Olympic runner (4)
3 Southeast Asian country, formerly known as Siam (8)
4 "The first requisite to success in life is to be a good ___" (1861) – English philosopher Herbert Spencer (6)
5 US frontiersman killed at the Alamo in 1836, who gives his name to a knife (3,5)
6 Potato ___, plant disease, a major factor in Ireland's Great Famine of 1845-49 (6)
7 1896 opera by Italian Giacomo Puccini (2,6)
8 Uninhabited Pacific island, visited in 1522 by Spaniard Gonzalo de Vigo, Europe's first castaway in the Pacific (8)
11 Largest city and capital of Ghana, captured by British forces in 1874 (5)
15 The ambitious economic proposals set out by American President Harry Truman (4,4)
16 Christina ___ (1830–94), English-born poet (8)
17 Virginia town where, in 1781, the British were besieged by Franco-American forces (8)
19 The ___, historic street in York, formerly a row of slaughterhouses (8)
20 ___'s Drift, British depot in southern Africa, attacked by Zulu forces in 1879 (5)
22 HMS ___, ship abandoned in 1848 during the Franklin Expedition to find the Northwest Passage (6)
24 Anna ___ (1820–78), English author of *Black Beauty* (6)
27 Jethro ___ (1674–1741), agricultural pioneer, inventor of a horse-drawn seed drill (4)
28 North Wales resort, at the mouth of the River Clwyd (4)

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SOLUTION Nº 23



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NAZI GNASHERS

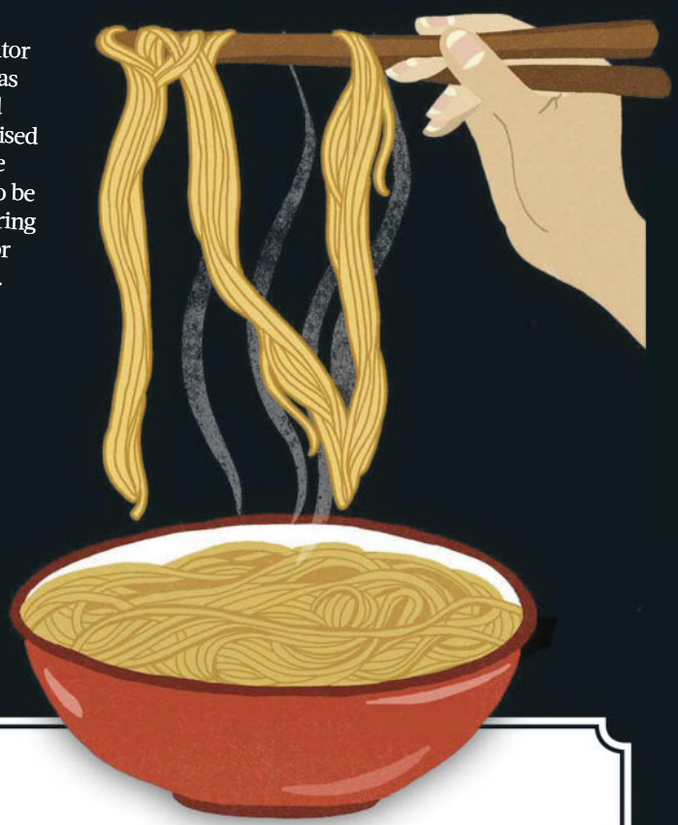
Following Hitler's suicide in 1945, Russian translator Elena Rzhevskaya was tasked with proving he was indeed dead. For days, she carried around a red jewellery box containing the Führer's jawbones, prised from his body following his cremation, until she tracked down dental X-rays proving the gnashers to be his. Stalin suppressed the findings, however, preferring to state Hitler was still at large, which some senior Soviet commanders believed well into the 1960s.

Noel-Baker at the double

Only one person in history has won both an Olympic medal and been awarded a Nobel Prize. Philip Noel-Baker was captain of the British team at the 1920 Olympics, winning silver in the 1,500 metres. The Nobel Peace Prize followed in 1959, awarded for his campaigning for nuclear disarmament. Noel-Baker also served as a Labour MP for 48 years, holding positions in Clement Attlee's postwar cabinet.

NAACP NEST-EGG

Perhaps surprisingly, the National Association for the Advancement of Colored People controls the rights to the work of the white satirist Dorothy Parker, and is the beneficiary of her posthumous earnings. When she died in 1967, Parker left her entire estate to Martin Luther King, despite never meeting him. But, after his assassination less than a year later, the estate rolled over to the NAACP.



NOODLE NEWS

When archaeologists work on a dig, most are searching for precious or historic objects such as crockery or jewellery. But in 2005, on a site on the banks of China's Yellow River, archaeologists came across an ancient foodstuff under the soil – a bowl of noodles. Radiocarbon dating put the well-preserved noodles at around 4,000-years-old. Understandably, none of their finders decided to dig in.

NORMAL NAPOLEON

The French Emperor is famous for his diminutive size but, at over 5'5'' in his stockinged feet, he was of above average height for a man of his time. Not only was he taller than his adversary Horatio Nelson, but 21st-century European leaders – France's Nicolas Sarkozy and Italy's ex-Prime Minister, Silvio Berlusconi – don't measure up to the 'Little Corporal' either.

NERO NONSENSE

The phrase 'Nero fiddled while Rome burned' refers to the Emperor's rumoured inactivity during a six-day fire, which devastated Rome in AD 64. But as mad about music as he was, Nero could not have played the fiddle – nor can the phrase be contemporaneous with Ancient Rome – as the violin wouldn't be invented for more than a millennium. The Emperor was more likely to play a type of lyre, the cithara.

Nevada nomenclature

The iconic 'Welcome To Las Vegas' sign – the creation of graphic designer Betty Willis – was erected in 1959. For over half a century, however, it's been misinforming visitors to Nevada as the sign actually stands in the town of Paradise, four miles outside Las Vegas' official city limits.

NORTHCLIFFE'S NOTION

In 1888, eight years before founding *The Daily Mail*, Alfred Harmsworth (later Lord Northcliffe) launched a weekly magazine, *Answers To Correspondents*, which purported to provide the definitive word "on every subject under the Sun". As a bizarre marketing wheeze, Northcliffe offered £200 of 'life insurance' to relatives of railway crash victims – as long as they had a copy of his mag on their person at the time of their death.

ILLUSTRATION: DAWN COOPER

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